

ENGINEERING

ENGINEERS TO OPEN CONVENTION MONDAY

(Concluded from Page 1, Column 5) cago during the week of June 26, which is scheduled as Engineers' Week at A Century of Progress exposition.

Registration will begin at 9:30 a. m. Monday, with the first session opening at 2 p. m.

"Current Problems" will be discussed at the opening session. First speaker will be C. T. Baker (Atlanta) on "Gas Engine Drives," followed by H. C. Guild (New York City) on "Condenser Design," and H. J. MacIntire (Urbana, Ill.) on "Brine Flow in Pipes." Dr. L. Nathan of Zurich, Switzerland, will make the final talk at this session on "A Modern System of Beer Production."

The Tuesday morning session on air conditioning will open with a discussion of "The Residence Cooling Problem—Aspects as Developed by Tests in the Research Residence," by A. C. Willard and A. P. Kratz, both of the University of Illinois.

"Self Contained Room Coolers," will be the subject of a talk by C. R. Neeson, chief engineer, DeLaVergne Refrigeration Division, Baldwin-Southward Corp., Philadelphia. Mr. Neeson's talk will be followed by a symposium on the subject of "Unit Coolers—Effect of Humidity on Heat Transfer Above and Below the Freezing Point," by W. R. Woolrich, P. W. Scates, and Mack Tucker, all of the University of Tennessee. A paper on "Aerodynamics of Air Conditioning," by S. M. Anderson of the B. F. Sturtevant Co., Boston, will be read at this session.

Tuesday afternoon's session centers around "Thermal Problems," and includes the following speakers: Dr. R. M. Buffington of Dayton, on "Absorption Refrigeration with Solid Absorbents"; Dr. L. A. Philipp, director, research laboratories, Kelvinator Corp., Detroit, on "Thermodynamics of the Sulfur-Dioxide Refrigerating System in the Presence of Lubricants"; Dr. W. W. Shaver of Corning Glass Works, Corning, N. Y., on "Windows and Their Relation to Air Conditioning"; and Dr. J. C. Goosman, New York City, on "Thermal Studies Applied to Carbon Dioxide Practice."

5 ICE COMPANIES NAMED ON SAFETY 'HONOR ROLL'

CHICAGO—Five ice manufacturing companies have been placed on the "honor roll" of the National Safety Council, Inc., here, for their work in reducing the number of accidental injuries in their plants during 1932, according to a report issued by the safety organization.

The honor roll companies are: Jamaica division of the Knickerbocker Ice Co., Baltimore division of the American Ice Co., Diamond Ice & Coal Co., Texas Ice and Refrigerating Co., and Warren Cotton Oil & Mfg. Co.

Commenting upon the ice industry's accidental injury record, the report says, "Fatalities marred an otherwise good accident record . . . during 1932. Frequency rates dropped for both temporary and permanent partial disabilities, and, although there was a slight increase in the severity rate for permanent disabilities, the days lost from temporary injuries declined."

"Fatalities, therefore, were mainly responsible for the 23 per cent increase in the general severity rate from 1931 to 1932. Improvement in frequency has occurred each year since 1928."

Before presenting its tabulations on

Air-Conditioning Booklet Issued By Frigidaire

DAYTON—Air-conditioning division of Frigidaire Corp. has just issued for distribution among architects, engineers, contractors, and owners of homes and business establishments a new 30-page booklet which is what might be termed a "series of reminders."

The cool blue-and-black publication first reminds its readers of the large number of places where air conditioning can be advantageously applied. Illustrations of homes, offices, stores, shops, restaurants, etc. having Frigidaire equipment appear in the book, accompanied by a bit of chatty copy on each page.

At the bottom of each page carrying pictures and discussions of possible applications, there appears a diagram showing in general how Frigidaire equipment may be installed in various types of structures.

Two pages discuss air conditioning for industrial establishments and for railway coaches, yachts, and other vessels. Diagrammatic outlines of installation plans appear with the copy and illustrations here, too.

Three pages carry illustrations and specifications of Frigidaire cooling units and compressors available for air-conditioning service. Another page talks about Freon, still another about

2 NEW CARRIER TRUCKS BUILT FOR REFRIGERATORS

DAYTON—Designed particularly for moving household electric refrigerators, two new carrier trucks are being manufactured by International Engineering, Inc., here.

Model X is equipped with 8-in. rubber-tired wheels and has relatively short handles. It is 53 in. long, and 20½ in. wide, and is designed especially for use on stairways and in halls. Weight of this model is 61 lbs.

Type Y is of the same width, but has long handles, the overall length of the carrier being 70 in. Its rubber-tired wheels are 5 in. in diameter. It weighs 68 lbs. Both of the carriers are made of rubber-coated steel throughout.

BEER SERVITOR LEASES ASSEMBLING SPACE

NEW YORK CITY—Beer Servitor, Inc., has leased 10,000 sq. ft. in the new building of New York Port Authority here for an assembling and distributing plant.

the year's disabling injuries, the report defines certain terms used in the compilations. "Disabling injury" means any injury resulting in death, permanent total disability, permanent partial disability, or temporary (more than one day or shift) disability.

"Injury frequency rate" is the number of disabling injuries per 1,000,000 man-hours of exposure. "Injury severity rate" is the number of days lost as a result of disabling injuries, per 1,000 man-hours.

The council's table regarding disabling injuries appears below. As used under the heading "Size Group," the word "unit" refers to the size of the various ice companies, based on their respective number of employees.

the qualifications of Frigidaire Corp. for production of air-conditioning equipment. Last page is another reminder of the large number of possible applications for air conditioning.

Size Group	Man-Hours			No. Disabling Injuries			Number of Days Lost			Injury Rate		
	No. of Industrial Units	Worked (Thousands)	Average	Death & Partial	Total	Death & Partial	Total	Pre- orary	Total	Pre- orary	Total	Frequency Severity
All Groups	69	26,259	9,459	6	10	602	618	36,000	6,416	11,203	53,619	23.53 2.04
Large Units	23	21,222	7,513	3	6	431	440	18,000	4,888	7,889	30,777	20.74 1.45
Middle-sized Units	23	4,069	1,584	2	4	134	140	12,000	1,528	2,236	15,764	34.41 3.87
Small Units	23	968	362	1	0	37	38	6,000	0	1,078	7,078	39.26 7.31

SCHAEFER ENGINEERS DESIGN BEER PUMP

MINNEAPOLIS—Companion product to the new beer coolers introduced recently by Harold L. Schaefer, Inc., distributor of Universal Cooler household and commercial refrigeration here, is a new automatic air pressure beer pump designed by Schaefer engineers.

This pump, which has capacity sufficient for maintenance of proper pressure on six kegs of beer simultaneously, is 30 in. long, 12 in. wide, and 19 in. high. Its weight is 75 lbs. It is powered by a 1/4-hp. Wagner motor, available for a.c. or d.c. current.

The tank, which will stand 150 lbs. of pressure, according to Schaefer engineers, is equipped with a Penn switch which cuts in automatically at 15 lbs. and out at 25 lbs. In addition, there is a safety valve to let off excess air pressure in the event that the automatic switch does not operate properly.

The pump itself is of the plunger type, and is made of solid brass, with a leather washer requiring no oil. The brass cylinder wall is cooled by an aluminum casting through which intake air circulates.

Air pumped through the tank passes through a fine chromium-plate brass wire mesh screen filter which removes dust and dirt from air delivered to the beer.

Bar Railing Equipment Built by Newman

CINCINNATI—Newman Brothers, Inc., here is manufacturing a line of bar railing and bar rail supports for use in beer gardens, restaurants, clubs, or any establishment where beer is being served. These fixtures are available in brass, aluminum, nickel silver, Monel metal, and chromium plate.

Also included in the Newman line is a number of rail standards, velour-covered rope railing, and rope posts.

Green & Sons Produce Draft Beer Coolers

PHILADELPHIA—Robert M. Green & Sons of this city is now in production with a line of draft beer dispensing cabinets, bottle storage cabinets, and keg storage coolers, officials of the firm have announced.

Draft beer dispensing units in 1-, 2-, 3-, and 4-tap models, keg storage coolers in 1 to 4 half-barrel sizes, and bottle storage cabinets in 4-, 5-, and 6-ft. lengths make up the line.

G. E. APPOINTS TWO NEW OIL BURNER DEALERS

NEW YORK CITY—To sell the complete line of General Electric air-conditioning equipment, including the oil furnace, two new dealers have been appointed by the G. E. air-conditioning department here.

Barker-Fowler Electric Co., Lansing, Mich., and Thompson-Sterling Co., Louisville, Ky., are the new dealers.

NEW YORK DEALERS TO SELL G. E. CONDITIONERS

SCHENECTADY, N. Y.—The air-conditioning department of the General Electric Co. has announced the appointment of L. C. Gunther of Middletown, N. Y., and Highlands Electric Co. of Newburgh, N. Y., as dealers for General Electric oil furnaces and air-conditioning equipment.

BUFFALO OFFICE MOVED BY REPUBLIC STEEL

BUFFALO—Republic Steel Corp. moved its district sales office here to 475 Abbott Road on May 20, according to N. J. Clarke, vice president in

Number of Days Lost											
Perm.	Partial	Temp.	Perm.	Partial	Temp.	Perm.	Partial	Temp.	Perm.	Partial	Temp.
6	10	602	618	36,000	6,416	11,203	53,619	23.53	2.04		
3	6	431	440	18,000	4,888	7,889	30,777	20.74	1.45		
2	4	134	140	12,000	1,528	2,236	15,764	34.41	3.87		
1	0	37	38	6,000	0	1,078	7,078	39.26	7.31		

BUSINESS NEWS PUBLISHING CO.

550 Maccabees Bldg., Detroit, Mich.

Special Section of Paper Devoted To Kelvinator

NORFOLK, Va.—Kelvinator dealers in this area, with their distributor, the Tidewater Electric Corp., here, officially launched their summer sales drive when they sponsored a special five-page section in the June 1 issue of the *Norfolk Ledger-Dispatch* devoted entirely to Kelvinator display advertisements and readers.

The streamer is first page of the special section dealt with the Kelvinator factory's new production records, new Kelvinator prices, and manufacturing processes, and carried articles on electric refrigeration's contribution to health, economy, and culinary convenience.

Dealers having advertisements in the Kelvinator section were H. Crockett-Phillip Levy Co., Exchange Furniture Stores, Levy-Page Co., D. Levitin & Son, and D. P. Paul Co., all of Norfolk; A. J. Legum, Berkley; Stanley Radio Co., Portsmouth; Harry Shuman Furniture Store, Portsmouth; H. R. Holland, Virginia Beach; R. L. Gaskins, Suffolk; W. T. Pace, Franklin; and Rooth Radio Co., Branchville.

Half of one of the Kelvinator pages carried a story and an advertisement concerning the Virginia Smelting Co., manufacturer of Extra Dry Esotoc, located in nearby West Norfolk. The copy described the company's product and its manufacture, and three photos showed views of the sulphur dioxide plants.

30-DAY GEORGIA POWER SALES TOTAL \$284,095

ATLANTA—With the Augusta Senators still out in front, the Georgia Power Co.'s "Hit the Ball" refrigeration sales contest has piled up sales totaling \$284,095 in the 30 days it has been running, well over 100 per cent of quota.

Special prizes and incentives to win have been announced at this time to stimulate further sales. First, the company is paying a cash bonus of \$1.00 per cubic foot on the sales of all deluxe Kelvinators during the contest. In addition, a free trip to Detroit will be given every salesman who sells a total of 100 cu. ft. in deluxe Kelvinators between May 4 and Dec. 31, 1933.

On each sale of any double-door General Electric, or of a model S-85 G. E., salesmen will receive a \$10 cash bonus.

13 DEALERS WIN PRIZES IN NORGE DISPLAY CONTEST

DETROIT—Thirteen winners in Norge Corp.'s dealer window display contest, held during April and May, were announced June 19 by J. A. Sterling, advertising and sales promotion manager. More than 300 photographs of window displays were submitted by dealers.

Weed & Co. of Rochester, N. Y., received the first prize of \$75. The second prize of \$50 went to the Edwards Furniture Co. of Portland, Ore., while the \$25 third prize was awarded to the Southwestern Electric Co., of Wichita.

Prizes of \$10 were given to each of the following dealers: Dulin & Martin Co., Washington, D. C.; Luger Furniture Co., Fargo, N. D.; Valley Stream Norge Co., Long Island, N. Y.; Gilmore Jewelry Co., Pensacola, Fla.; Charles A. Horn, Ashland, Pa.; Max Barnett Furniture Co., New Orleans; John Breuner Co., Sacramento, Calif.; Thayer Piano Co., Honolulu, Hawaii; Kinney & Levan Co., Cleveland; and Cason, Monk & Co., Nacogdoches, Tex.

Air Brakes Close Five Westinghouse Sales

GALESBURG, Ill.—Westinghouse air brakes brought a sales presentation to dead stop here recently, and then sold five Westinghouse refrigerators in two days.

Edgar A. Sorrell, branch manager of Peoria's Westinghouse Electric Supply Co., was on the sales floor of the Illinois Power and Light Co. branch here, preparing for a sales meeting, when a man and his wife entered and asked to see a refrigerator demonstrated.

As he stepped up to a refrigerator, Mr. Sorrell said, "Now this unit is built by Westinghouse, and—"

"Wait a minute!" the prospect said. "Is that the same Westinghouse that built air brakes?"

The answer, of course, was yes. "Well, I've been a railroad engineer for 21 years, and those brakes have saved my life a good many times," said Railroadman Smith. "I'm ready to sign your contract if my wife says the size is right."

During the next two days, four other railroad men from Galesburg (a C. B. & Q. division point) came in to buy Westinghouse refrigerators as the result of a little sales promotion by Engineer Smith.

REFRIGERATION WEEK HELD IN SAN DIEGO

ELECTRIC REFRIGERATION NEWS

Registered U. S. Patent Office

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ALL-INDUSTRY CONFERENCE IN DETROIT JULY 6

ENGINEERS HEAR NATHAN'S PLAN OF BREWING BEER

Record Attendance at Spring Convention Of A.S.R.E.

By John T. Schaefer

CHICAGO, June 26 (Special Wire to ELECTRIC REFRIGERATION NEWS)—A new brewing system developed by Dr. L. Nathan of Zurich, Switzerland, during the American prohibition period was explained by Dr. Nathan in the first session of the American Society of Refrigerating Engineers' convention here today.

The society's meetings and A Century of Progress have attracted refrigerating engineers from all parts of the United States and foreign countries for what is expected to be a record breaking attendance for an A.S.R.E. convention.

Tomorrow morning's meeting will be devoted entirely to air conditioning, while the afternoon session will treat several thermal problems.

Technical sessions are being held in the Bal Tabarin of the Sherman hotel, large ballroom on the sixth floor which is air cooled by an ice system. Today's session was delightful.

(Concluded on Page 16, Column 1)

NEW COILS DESIGNED BY CHICAGO CONCERN

CHICAGO—Refrigeration Appliances, Inc., of this city has introduced a complete new line of finned evaporator coils for commercial installations, according to H. J. Krackowizer, president of the firm and designer of the coils.

The new coils have a number of new features such as full-size return bends to permit passage of refrigerant through the U-shaped end-pieces without restriction resulting from the reduced-size return bends which have been employed by previous coils. This was accomplished, Mr. Krackowizer states, by developing a special bending

(Concluded on Page 16, Column 1)

CLARK HEADS FRIGIDAIRE SALES PROMOTION DEPT.

DAYTON—Lee A. Clark, connected with Frigidaire Corp. for four years, has been appointed sales promotion manager of that organization, according to H. W. Newell, vice president in charge of sales.

During the last two years, Mr. Clark has served as assistant manager of the sales planning division. Before coming to Dayton, he was general sales manager of the Fort Wayne Engineering & Mfg. Co., and before joining that concern was connected with the Wayne Co., pump manufacturer in Fort Wayne.

Kansas Anti-Merchandising Law on Appliances Held Invalid

TOPEKA, Kan.—The Kansas anti-merchandising law, which limited appliance sales by utility companies, was declared unconstitutional by the state supreme court in a decision delivered June 10.

The decision reversed the opinion of the Shawnee county district court which upheld the law in the case brought by Cities Service gas distributing companies.

The law is "unconstitutional and void because it is in violation of the fourteenth amendment to the constitution of the United States in that it denies to certain individuals, firms, and corporations the equal protection of the laws," states the opinion written by Justice William E. Hutchinson.

"Where a public utility corporation is authorized to do business in Kansas

Heating Engineers Discuss Current Problems

By Elston D. Herron

DETROIT—Meeting Thursday, Friday, and Saturday of last week in Hotel Statler here for their semi-annual convention, 294 members of the American Society of Heating and Ventilating Engineers heard addresses on current problems and developments of the trade—a few of which touched upon the air-conditioning field.

Only the mornings of the convention's three days were devoted to general sessions of the society, the afternoons being given over to social activities on the first two days, while on Saturday afternoon, the engineers visited the American Blower Corp. plant to see that company's exhibit of air-conditioning equipment.

First paper presented Thursday morning was one by Prof. G. L. Larson, Prof. D. W. Nelson, and O. C. Cromer, all from the steam and gas engineering staff of the University of Wisconsin. The paper contained results of a survey made by the mechanical engineering department at (Concluded on Page 16, Column 4)

LEONARD INCREASES PRICES \$1.50 TO \$10

DETROIT, June 28—Price increases ranging from \$1.50 to \$10 will go into effect today on all models of the Leonard refrigerator line, according to officials of that company. This makes \$99.50 the base price of the Leonard line.

The change in prices is shown in the following table, based in each case on the retail installed price in Zone 1 (factory territory):

	Former Prices	New Prices
L-425	\$ 98.00	\$ 99.50
L-531	125.00	130.00
L-641	147.50	156.50
L-651	148.00	153.00
L-551	177.00	181.50
L-651	201.00	205.75
L-752	260.00	263.50
PL-451	169.00	173.75
PL-551	200.50	205.00
PL-751	266.00	271.00
PL-952	342.50	346.50

KELVINATOR SHIPMENTS FOR 19 DAYS ARE 18,176

DETROIT—During the first 19 days of June, Kelvinator Corp. shipped 18,176 household refrigerators—more than all shipments for the entire month of June, 1932, when 17,197 units were sent out from the factory, according to H. W. Burritt, vice president in charge of sales.

He stated that orders on hand indicate that shipments this June will be more than double those of the same month last year. Orders for this month have already exceeded the number of April shipments, which totalled 30,116 to set a new Kelvinator record up to May of this year.

"The average refrigerator sales curve up until this year has shown a peak in April, with the definite dropping off in May, and a comparatively sharp decline in June," Mr. Burritt said. "This year, Kelvinator expects its peak volume to be maintained until at least late summer."

in the manufacture, purchase, supply, and distribution of artificial and natural gas, the sale of gas appliances by it, under the facts and circumstances set out in this opinion, is intimately connected with and incidental to the same, and is an implied power of such company because it directly and proximately tends to accomplish the general purpose for which the company was incorporated."

The court held that there was evidence to show that 80 to 90 per cent of the gas appliance fixtures were sold by the utility companies and that they sold and installed safe and standard equipment at fair and reasonable prices and at a fair profit. Long term contracts permit consumers to enjoy use of modern equipment and campaigns of the utilities companies went

(Concluded on Page 6, Column 3)

Official Announcement

UNIVERSAL COOLER CORP.
Green and Melville, Detroit, Mich.

June 26, 1933.

F. M. Cockrell, Publisher:

Believing that sufficient information is now available to permit constructive action, the meeting of all manufacturers engaged in the refrigeration industry, for discussion of the most effective means of functioning in cooperation under the provisions of the law, will be held in Detroit at 2 o'clock on the afternoon of July 6.

Your generous suggestion that the ELECTRIC REFRIGERATION NEWS would provide facilities for the meeting in the Maccabees building, is accepted with thanks.

It is requested that all manufacturers who plan to attend the meeting be asked to write to ELECTRIC REFRIGERATION NEWS requesting an invitation and registration card.

G. M. JOHNSTON,
Chairman, Refrigeration Division, N.E.M.A.

Kelvinator Prices Will Begin at \$99.50

DETROIT, June 28—Kelvinator's price increase, made public through a national newspaper advertising campaign two weeks ago, will range from \$2 on the lowest priced model to \$51 on the 23-cu. ft. deluxe model, according to H. W. Burritt, vice president in charge of sales.

The increase, which becomes effective today, sends the basic retail installed price of the R-42 model, lowest priced in the Kelvinator line, to \$99.50. Mr. Burritt said.

Explaining that even the new prices are being advertised as subject to further change without notice, Mr. Burritt said that continued rise of raw material costs would mean the likelihood of a second adjustment.

The change in Kelvinator prices is shown in the following table, based in each case on the zone A retail installed figures.

	Former Prices	New Prices
R-42	\$ 99.50	\$ 99.50
R-53	126.50	132.50
R-64	149.00	156.50
R-75 (new model)	193.50	
K-80	249.00	252.50
PK-40	159.00	164.00
PK-50	179.00	184.00
PK-60	208.00	212.00
PK-70	239.00	244.00
PK-80	275.00	279.50
D-55	224.00	228.00
D-75	254.00	258.00
D-90	284.00	289.00
D-120	329.00	344.00
D-150	399.00	410.00
D-230	546.00	575.00
	699.00	750.00

2-CYLINDER COMPRESSORS USED IN GILFILLAN LINE

LOS ANGELES—Comprising the 1933-34 household electric refrigerator line of Gilfillan Bros., Inc., here are three models having Gilfillan two-cylinder compressors, General Electric motors, and Seeger cabinets, according to R. J. McNeely, sales manager of the company.

Smallest of the line is model 500, having a net food storage capacity of 4.15 cu. ft. and a shelf area of 8.5 sq. ft. Its exterior is lacquer, and its two ice trays make 56 cubes at one freezing.

Model 600 has a net capacity of 5.26 cu. ft., a shelf area of 10.5 sq. ft. Its three ice trays produce 84 cubes at a freezing. Exterior of this model is finished in porcelain.

Largest model is No. 700, a lacquer-finish refrigerator with a 6.25-cu. ft. net storage capacity, and a shelf area of 12.5 sq. ft. Its four trays make 112 ice cubes at one freezing.

While this activity progresses out in the field, much headway is being made in Washington, D. C., in formation of the organization which will administer the new law. Employment of staff workers has been started, and on June 26, a number of business leaders met in Washington, D. C., to form a Long-Range Economic Planning Committee which will operate under supervision of the Department of Commerce, to supplement work of the recovery administrators.

One of the administration's chief

GIBSON BUILDS NEW MODERNISTIC UNITS

GREENVILLE, Mich.—Two new Gibson electric refrigerators, dressed in cabinets with modernistic lines, are making their bow this week. Model LG-53, with a net capacity of 4.94 cu. ft., is retailing in Detroit at \$114. Model LG-72, with net capacity of 6.56 cu. ft., is being offered in Detroit at \$149.50.

These cabinets have overlapping doors, rather than the flush type used on other models of the modernistically styled Gibson line. Each has an interior dome light. The standard Gibson hermetically sealed compressor, powered by a one-fifth horsepower motor, refrigerates the box.

AMERICAN BLOWER PLANS SALES OF DECALORATOR

DETROIT—Steam refrigeration applications and plans for marketing the Decalorator, new steam refrigeration unit which will be merchandised by the company, were the major subjects up for discussion at an air-conditioning conference held by American Blower Corp. here last week.

Most of the discussion concerning the steam refrigeration plant was devoted to its possibilities in the field of air conditioning, especially for cooling air in large buildings and industrial plants.

Presentation of facts on the company's new hydraulic coupling, which permits a number of speeds with fans driven by constant-speed motors, also occupied an important place on the program of the three-day conference.

H. E. Barth, sales manager, called the convention to order Thursday morning, June 22, and the sales engineers were welcomed to Detroit by James Ingalls, chairman of the board. The first session was followed by an afternoon of golf at the Western Golf

(Concluded on Page 17, Column 5)

NEMA CHAIRMAN CALLS MEETING TO DISCUSS FAIR PRACTICE CODE

News Will Be Host to Industry Executives At Dinner Party

By F. M. Cockrell

DETROIT—G. M. Johnston, chairman of the Refrigeration Division of National Electrical Manufacturers Association (Nema), has announced Thursday, July 6 as the date, 2 p.m. as the time and the Maccabees building, Detroit, Mich., as the place of the all-industry conference for consideration of methods of cooperation under the terms of the National Industrial Recovery Act recently passed by Congress.

Invitations are being sent to the chief executives of manufacturers of electrical refrigeration equipment known to be actively in production and invitations may be obtained upon request by any others having an interest in the industry. This includes

LATE BULLETIN—Arrangements are being made for manufacturers of non-electrical refrigeration parts (cabinets, cooling units, compressors, etc.) to meet in the Maccabees Bldg. Thursday morning, July 6, not later than 10 a. m. to discuss matters of mutual interest in advance of the general conference. The News will provide rooms for any desired number of these group meetings.

manufacturers of unit parts such as cabinets, compressors, condensers, cooling units, motors, controls, etc., also manufacturers of materials and supplies such as insulation, tubing, and other products used in large quantities.

The Nema Refrigeration Division has accepted the offer of ELECTRIC REFRIGERATION NEWS to provide facilities.

(Concluded on Page 6, Column 5)

400 GIBSONS ARE ORDERED FOR NEWARK APARTMENT

NEWARK—Four hundred Gibson electric refrigerators will be installed in the Prudential Third Ward Apartments here, a group of buildings being erected by Prudential Life Insurance Co., according to Paul R. Krich, sales manager of Krich Distributing Co., local Gibson distributor which made the sale.

Comprising six large buildings covering an area of 700x200 ft., the construction involves an expenditure of nearly \$2,000,000. Completion of the buildings is expected about Sept. 1.

Two Industries Submit Codes of Fair Competition to Government

WASHINGTON, D. C.—With two tentative codes already submitted to authorities directing application of the National Industrial Recovery Act, practically every industry in the nation is now taking steps toward preparation of a code which will mesh with the provisions of the business review measure.

While this activity progresses out in the field, much headway is being made in Washington, D. C., in formation of the organization which will administer the new law. Employment of staff workers has been started, and on June 26, a number of business leaders met in Washington, D. C., to form a Long-Range Economic Planning Committee which will operate under supervision of the Department of Commerce, to supplement work of the recovery administrators.

One of the administration's chief

problems concerned the matter

Our Guests at the 487 G-E REFRIG come to Chicago



W. L. Thompson, G-E Distributor for Boston territory, whose organization led the nation in General Electric's Spring Sales Contest, with 186.3% of quota.

FROM the Atlantic to the Pacific—from Canada to the Gulf—G-E refrigerator salesmen are coming to Chicago's Century of Progress as guests of the General Electric Company. Winners in the great sales contest just closed will arrive July 20th to be feted by General Electric at a Victory Celebration and Banquet to be held in their honor.

● General Electric is proud of these men. During the G-E Spring Sales Contest, starting April 3rd and ending June 3rd, they broke all existing G-E refrigeration sales records—some exceeding quotas by better than 700%! And this in spite of the fact that normal contest quotas were *increased 25%* during the period. With the campaign hardly under way, G-E refrigerator sales reached a new peak—factory shipments climbed to a trainload a day, with distributors, dealers and salesmen from coast to coast pleading for

more! In 7 cities G-E distributors reported the greatest May business in history. Midway in the contest a score of G-E dealers were already over the top on quotas. Sales and deliveries by one distributor the final week of the campaign totalled \$474,547.00! ● Given a

Tops Quota by 733.1%

M. G. HYLTIN, dealer salesman of Lockhart, Texas, topped the field with 733.1% of quota.

product with the 3 to 1 public preference enjoyed by General Electric refrigerators—and the inspiration to win—487 General Electric refrigerator salesmen came through with record-breaking sales! All honor to them!

Century of Progress!

REFRIGERATOR SALESMEN

from coast to coast!



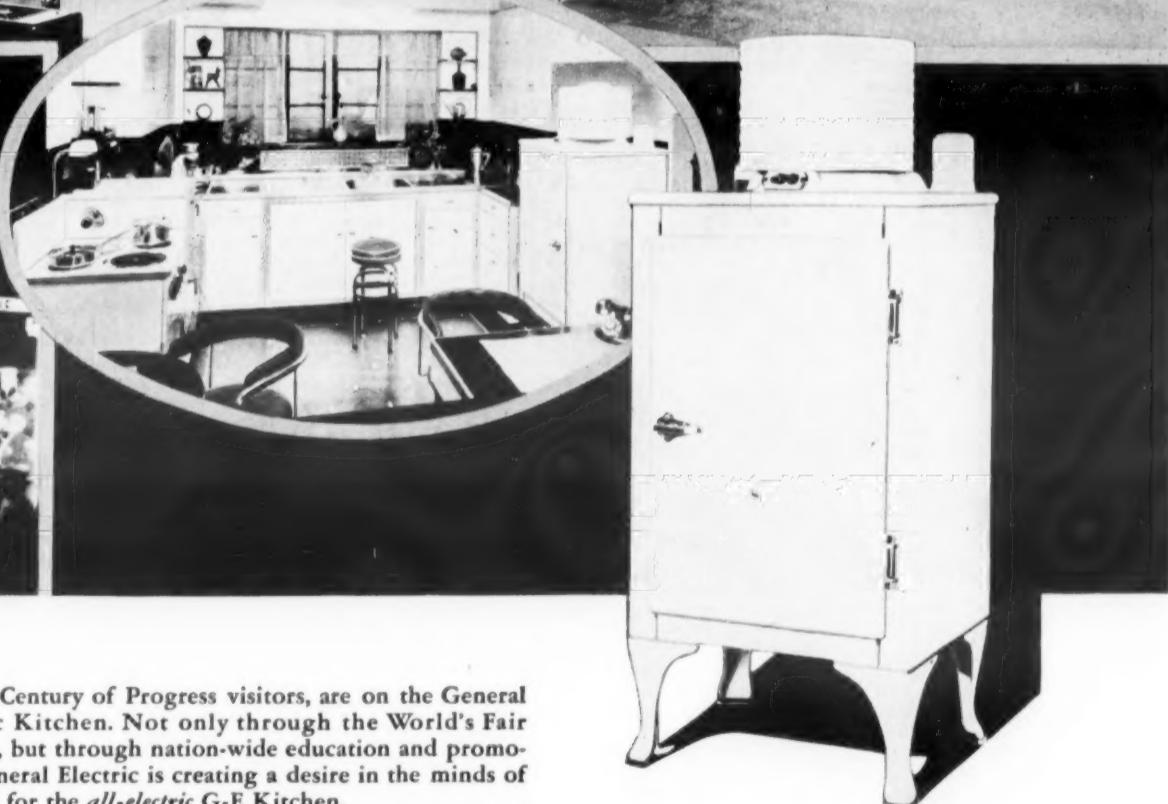
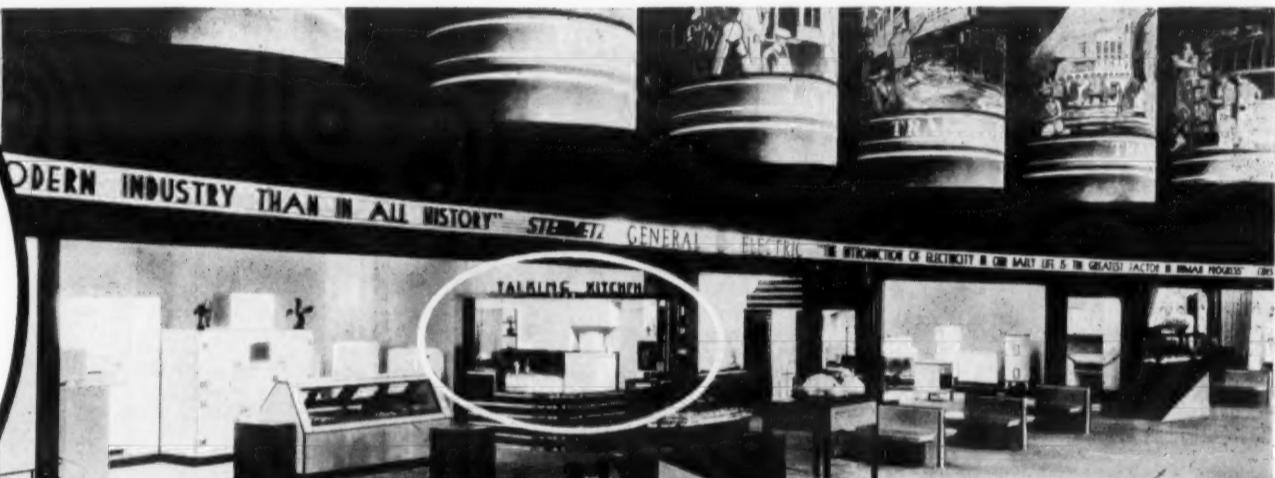
At Chicago's Century of Progress, the General Electric exhibit is attracting the attention of millions. Greatest interest is centered in the complete General Electric Kitchen and its story of freedom from kitchen drudgery.



Night and day the General Electric "Talking" Kitchen at the World's Fair is telling its enthralling story over specially installed automatic sound equipment, to countless thousands of interested prospects—"I am the new 'guest-room' of the home—attractive, cool, clean and comfortable . . . I eliminate kitchen drudgery, save you hundreds of steps and bring you hours of new freedom every day . . . As little as \$7 a month will start one in your home . . . You can build a complete and individual General Electric Kitchen step-by-step, beginning with a G-E refrigerator . . ." Over one-half of all inquiries received by General Electric

from A Century of Progress visitors, are on the General Electric Kitchen. Not only through the World's Fair exhibits, but through nation-wide education and promotion General Electric is creating a desire in the minds of millions for the *all-electric* G-E Kitchen.

For the G-E retailer, this far-reaching activity means more refrigerator sales and the opportunity for continuous profits—for each refrigerator purchaser becomes a prospect for all G-E appliances in the General Electric Kitchen. General Electric Company, Specialty Appliance Sales Department, Section DF 62, Nela Park, Cleveland, Ohio.



General Electric's 1933 line of refrigerators with greater value than ever before—with new models, new features, and the lowest prices in all G-E history—is recording new sales records almost daily!

GENERAL ELECTRIC

BY GEORGE F. TAUBENECK ---

Local Boy Makes Good

Mansfield, Ohio, is proud of R. E. IMHOFF. This young man, a product of Mansfield and of its educational system, is now sales manager of the merchandise department of the Westinghouse Electric & Mfg. Co. He reports directly to N. G. SYMONDS, vice president and general sales manager, at East Pittsburgh.

Studious, highly—or perhaps deeply—intelligent, keenly analytical, Mr. Imhoff has responsibility far beyond his years. He has grown up with Westinghouse, and is so thoroughly familiar with its past and its policies that in his references to Westinghouse he makes you believe the company an animate being—an individuality with its own thoughts, opinions, and motives. It has become *personal* and personalized to him.

When he talks, Mr. Imhoff studies his hands, or some object in them. Rarely looks at you until you begin talking yourself. One result is that his speech flow is smooth, undiverted, and sweeping as a waterfall. In his quiet way he is very convincing.

He is undoubtedly one of the best informed men on the electrical appliance business we have ever met. It's difficult to mention a company, a sales plan, or a particular situation on which he hasn't more information than you have.

Under his direction are the following department heads:

RAY COSGROVE, household electric refrigeration.

H. M. WIBLE, commercial refrigeration and cooking.

H. C. BENO, small humidifiers and fans.

REESE MILLS, electric ranges.

L. L. SHAUBER, laundry equipment and vacuum cleaners.

H. B. DONNELLY, heating appliances.

NORMAN L. MYERS, other appliances.

Mr. Imhoff took particular care to explain this set-up to us, because once on this page we mentioned our confusion and befuddlement whenever trying to figure out the seemingly complicated executive structure of the Westinghouse organization.

At the top of the company are the following men: A. W. ROBERTSON, chairman of the board; F. A. MERRICK, president; J. S. TRITTE, vice president and general manager; N. G. SYMONDS, vice president in charge of sales; S. M. KINTNER, vice president in charge of engineering; and C. H. CHAMPLAIN, general works manager.

Red-Headed Man

S. H. PITTMAN, advertising manager of the Westinghouse merchandise department, is a red head. With everything that generally accompanies red hair—vibrant, dash, and go.

He is, in addition, a remarkably good-humored and likeable young fella—enthusiastic, warmly cordial, ready to grin, quick witted, and friendly as a pup. The combination of all these qualities make one say "here's a regular, and one helluva good egg" almost instantaneously after meeting him.

He can be a driver, as some of his assistants might testify; but he has directed his naturally fiery nature into productive channels. No prima donna temper blow-ups; just lots of work.

Young Mr. Pittman is, of course, delighted at the turn refrigeration affairs have taken in the last couple of months. And he, too, is very happy to see a movement toward higher prices. It has always disturbed him mightily that "nobody has made any real money out of household refrigeration yet"; and that, he thinks, is a cardinal sin.

Just after we left his office he dashed off for Pittsburgh for a short conference, after which he was to head down to Atlanta.

Mr. Pittman has some decidedly definite ideas about many things, but his agile mentality permits him to shift opinions and tack in a different direction on short notice. Changing his mind is not a major operation.

Cosgrove Snowbound

Ever since the days when we knew him as manager of commercial refrigeration sales for Westinghouse, we have warmed up to RAY COSGROVE, now manager of the refrigeration department.

Ray is a deliver for information—a reporter, if you will. He has, too, a grand sense of humor, and is something of a jokeshop. Open, frank, and aboveboard, he can give as well as take information. Doesn't have one of those mousetrap minds which clamp down on a fact and hold it uselessly until pried open by superior force. All these things endear him to an editor, as well as to his associates. To them,

Seal(ed) Refrigeration



While "Buddy," Walter Jennier's famous trained seal with the Dill circus, was rifling G. E. refrigerator for breakfast at circus grounds, "Lady," went into her act and tried to steal the show by posing "On the Top."

Ray Cosgrove is "top."

"What," he asked us, "have we done to deserve all this? Today the Westinghouse refrigeration department has more than 13,000 back orders piled up, and we're losing out every day. We've been snowbound by orders for almost two months, and there's no sign of a thaw."

Now that, you might think, is a very happy situation. More business than they can handle! Orders for more refrigerators than they can make. How unlike the common story during the last three years!

But there's another side to the story. Westinghouse dealers in some localities have grown impatient. Unable to get shipments, and with sales sticking around waiting to be picked off, like Grimes Golden apples on a heavily laden tree, they have taken other makes of refrigerators on temporarily. And Westinghouse is missing those sales. Which isn't so good.

The plant at Mansfield is running three eight-hour shifts, 6 to 2, 2 to 10, 10 to 6. Speed-up machinery has been installed (including an electric welding machine on which the welding disk actually rolls and welds in a bath of running water—thus making for quick cooling).

Mr. Cosgrove, like everybody else, is highly in favor of higher prices. Chief reason is that longer margins will help his wholesale outlets considerably. Of these, about one-third (by volume) are independent distributors in metropolitan areas, one-third are jobbers, and one-third are Wesco (Westinghouse Electric Supply Co.) houses.

Happy Family

Spent time with several other Westinghouse men at Mansfield. In spite of the fact that they begin work over there at 7 o'clock every morning during the summer (in order to synchronize operations with eastern plants on daylight saving time) these fellows are as good-humored a bunch as we've ever seen. The old "happy family" idea is certainly exemplified here.

Chatted with REESE MILLS, manager of the range department, and found him just as sure as ever that some day range sales are going to be as important as electric refrigeration. He thinks ELECTRIC REFRIGERATION News should devote more space to ranges, as do Messrs. Imhoff and Pittman. And, like General Electric's "Mike" Mahony, Mr. Mills believes the all-electric kitchen to be the idea of the age.

BOB RICHARDS and GIL BAIRD, publicity men extraordinary, were there to lead us, with tongues hanging out, through the busy Westinghouse factory. (Some day we're going to figure up the total number of miles we've walked through factories on inspection tours.) Richards is another Mansfield product. Baird, who is a Fuller & Smith man, labors in Cleveland.

Met R. R. LYNCH of the merchandise advertising department, a young man who is a natural athlete if we

This should be evidence that there is a genuine and heavy demand for mechanical refrigeration all over the land just now. Power lines or no power lines, people want automatic refrigerators.

'Neath Nela's Ivy Towers

You could write songs about the new offices of the General Electric refrigeration department. They're out in Nela Park now, you know, and they're idyllic as a country club.

Nela Park is the home of the General Electric mazda lamp. To look at the vine-clad buildings ensconced there in oceans of greenward and laved by cooling breezes, you'd never know that Mazdaland has been invaded by the Yellow Peril, and has been fighting desperately. All is calm, all is bright, all is peaceful, and all is bucolic.

Named for the now defunct National Electric Light Association (grandchildren of ART SCAIFE and TIMMIE TIMMERMAN may puzzle all their natural lives how the park got its moniker), Nela Park is a real honest-to-John park, with all the trimmings.

MIKE MAHONY says the surroundings are like a university. WALTER DAILY shakes his head, and says he misses the noise and bustle of the Hanna building. All the boys admit that it's too swell place for work. But they like it. And who wouldn't???

Mahony on Prices

A curious phenomenon occurred last week. Three of the five top-column, front-page stories of ELECTRIC REFRIGERATION News bore the tidings that as many different refrigeration manufacturers were raising prices. A fourth carried the news that G. E. was lowering its list quotations!

This highly unusual spectacle (for the benefit of those who have come in since the curtain raised, we should point out that General Electric has until recently been consistently the highest priced refrigerator on the market) caused MIKE MAHONY, G. E. merchandising manager, no end of glee when he picked up the June 21 issue of the News and noted the front page. We know, because he was looking it over for the second time when we came in last week.

"Mike," of course, is very happy just now. Unofficially, we hear that General Electric's refrigeration business in May was greater than it had been in all the previous months of 1933, with possibly a couple of 1932 tail-enders thrown in for good measure.

That would make any merchandising manager happy. Added to that is the daily substantiated knowledge that the boom is still on, with no signs of letting up.

In spite of his chortling over the front-page sitcheeayshun in the last issue of ELECTRIC REFRIGERATION News, "Mike" is demmed glad to see prices rising. It means a greater margin for his company to work on; but most of all it means more margin for distributors and dealers.

"It costs a dealer just so much," he points out, "to stock, display, advertise, deliver, and install a refrigerator. Of course, his overhead has come down some, but there's a certain irreducible minimum. Not long ago the average price per sale was more than \$200; now it can't be more than \$150. And that takes a helluva chunk out of his margin. We'll all be glad to see prices come back up."

Frantz and Codes

Talked to C. G. FRANTZ, president of Apex, and found him elbow-deep in work on industry codes for use under the Industry Recovery Act. He is an active member of the committee of the American Washing Machine Manufacturers Association which is working on such a code, and is also working with other leaders among vacuum cleaner manufacturers toward the same end.

The firm of Ernst and Ernst, he informs us, has been retained by the washing machine group to make a survey of the industry with a view toward determining the basis of a uniform cost accounting program, as well as working out details of a schedule of rates and hours for labor.

Rural Demand Heavy

One of the busiest plants in Cleveland is that of the Perfection Stove Co., which manufactures the Superflex oil-burning refrigerator. After the slow start experienced by manufacturers of electric refrigerators this year, production and sales of Superflex jumped to new highs late in April and May; and thus far in 1933 the company's sales have been 200 per cent of 1932 sales for the same period.

No less than 180 distributors of Superflex oil-burning refrigerators have contributed to this boom. In some cities Sears Roebuck retail stores are selling these absorption-type refrigerators. (For some time, you know, Montgomery Ward has been selling the oil-burning refrigerator manufactured by Gibson.)

storm-blast which came howling from the utter blackness ahead.

The gigantic waves thundered, battering with shivering impact as they broke over the craft, spattering the decks with a roaring rush of water. The dim lights of the ship shone on spots of white spray churned up by the terrific blast as it beat upon the liquid jet. It was one of the great storms of the memorable winter of 1918-19.

"The frail destroyer creaked and groaned like a living thing in mortal fear and pain. The lifeboat situation was serious. If they were swept away? . . . Ensign Daily decided to inspect them.

"In the face of a gale, that some said was blowing at the rate of 100 miles an hour, the Ensign, wearing his heavy sea boots, crept out on deck, followed by three men. They clutched at ropes as the slicing waters washed along, a rush of sea that struggled to sweep them overboard.

"Inch by inch Daily climbed up where he could look at the lashings of one of the aft boats. The stinging brine, whipped by the storm, scratched like brambles as it lashed his face, and the chill water rushed into his nostrils, driving the breath from his body.

"Without warning came one great climactic blast and break of wave. The lashings of the boat snapped under the strain. Boat and man pitched downward into the icy Atlantic.

"Someone acted quickly, otherwise the bones of Ensign Daily now would be lying in the sandy slime of Davy Jones' locker. In a split second after the cry, 'Man overboard,' the man at the wheel gave the ship the 'fan tail.'

"Around she swung, pushed by the storm, until her starboard gunwales were for a perilous second lashed along their length by the hungry water. For another fraction of a second the blinding searchlight picked out the face of the Ensign, a pale speck against a black marble wave, and then it swung in a mad parabola toward the sky.

"A lifebuoy and line hissed into the sea. It was a lucky shot. As the little ship floundered and missed foundering by breathless margins, the Ensign, numbed by the deadly chill of the water, was hauled aboard. It was a miraculous rescue, a thing that could happen only once in a thousand attempts."

Here is Mr. Robbins' description of Walter Daily:

"In appearance he is compact, clean-cut. His movements, quick, energized, direct, and aggressive, suggest the officer. His jaw is square, the rugged bony structure underneath is covered by a muscular sheath—there is not an ounce of fat on the man."

"His mouth is broad, it can break into a smile or close with the menacing snap of the proverbial steel trap. His eyes snap and sparkle—most of the time they twinkle with amusement, for Walter Daily has a keen sense of humor. A thick thatch of dark hair covers his well-modelled skull. His face, built upon broad planes, is sculpturally interesting."

And near the end of the sketch, this:

"Daily played a great game of hockey while at Yale. His affections since then have been transferred to golf. He is one of the prominent members of the Canterbury club—a 10-handicap player. He was active in bringing the Western Open to Cleveland last summer, and acted as publicity man for the tournament."

"Needless to state, editors were well deluged with news concerning the event. He is fond of air travel, most of his business trips are taken by plane. His great ambition is to become sufficiently wealthy to own a yacht."

Dorsey Hines, 200%

DORSEY HINES, G. E. distributor in Baltimore, was out at Nela Park during our visit, and reported sales for 1933 double those of 1932 (equivalent period). Can't tell him it isn't going to be a banner year for refrigeration.

He was scrutinizing the layout for a double-page spread advertisement in ELECTRIC REFRIGERATION NEWS. Than which, as Messrs. COCKRELL and MATEER would tell you, nothing could be sweeter.

Walter's really remarkable career was celebrated in the current issue of the Cleveland Weekly, which is one of those elite business, art, society, sports, and politics papers which help boost the tone of American journalism. We found it in a copy which we picked up in a hotel newsstand.

This page scooped the Cleveland Weekly by about seven months (Nov. 23, 1932) on most of the things that magazine said in its June 17 issue about Walter Daily, but several excerpts from the article are worth reprinting here.

Our friend, CARLE ROBBINS, author of the sketch, tells the following yarn:

"And there is something else which Daily will not forget: As ensign aboard the torpedo boat destroyer, the converted duPont, he was weathering a storm in the mid-Atlantic. The slim ship was headed directly into the

everyday negligence of the old Detroit Majestic distributorship are now reporting daily to Mr. Trostler.

"KELVINATOR DEALERS make another Announcement"

PRICES HAVE GONE UP!

OLD PRICES
NEW PRICES
\$99 50
Installed
PLUS
FREIGHT
AND UP



**—But we will sell all KELVINATORS
now on hand at the old, low prices!**

PRICES on all Kelvinator models have been increased. And the new, higher prices are subject to further increase without notice. We announced last week that this price increase was necessary because of the rise in commodity prices, which has been as much as from 22 to 102 per cent on many materials used by Kelvinator.

In anticipation of this price increase, we ordered as many Kelvinators as the factory could deliver—which was not

many because dealers everywhere were doing the same thing. But those we did get—we are going to sell at the old prices.

While they last—all Kelvinators in stock, bought at the old prices, will be sold at the old prices. The saving is yours—if we have the model you want. There are not many—so you had better not wait long before coming in. New prices subject to further increase without notice. Small down payment and easy terms on the ReDyCo Plan.

THESE
NEW PRICES
SUBJECT TO
FURTHER INCREASE
WITHOUT
NOTICE

(Dealer's Name and Address Here)

KELVINATOR

Kelvinator

ON THE left is a reproduction of an advertisement that will appear in hundreds of newspapers all over the country this week.

Read the copy. Behind it is a policy of dealer cooperation which has made the Kelvinator franchise so valuable to Kelvinator dealers.

Since the first announcement of Kelvinator's policy on prices, which was made the last of March, Kelvinator dealers have been "partners" in all developments. They have been given the opportunity to cash in to the fullest extent on a decided advantage over competition. The results speak for themselves.

In April, 30,116 units were shipped—the largest month's business in 19 years. And May established a new, all-time high record with 43,357 units. At the time this is written, it seems likely that June orders will surpass May.

Experience this Spring has proved, in more ways than one, that Kelvinator is the most desirable franchise in the industry. Let us tell and show you why.

★ ★ ★

KELVINATOR CORPORATION
14245 Plymouth Road, Detroit, Michigan
Factories also in London, Ontario, and London, England

(287)

MAJESTIC DEALERS REUNION ON JULY 5

CHICAGO—A reunion of Majestic refrigerator and radio dealers from all parts of the country will be held by the Grigsby-Grunow Co. on July 5 at the Drake hotel here. Many of the visiting dealers will be the winners of a dealer contest held by Majestic from Jan. 15 to June 15, in which all expenses for the trip were awarded to successful participants.

Dealers taking part in the contest were awarded points, in the form of mileage coupons, based on dollar volume of sales. Those not winning sufficient mileage to cover all expenses were given the privilege of applying their credits on their expenses for the trip.

Features of the day will include an escorted tour of the Majestic factories, an evening banquet followed by a Mardi Gras, a series of performances by various entertainers, and a dance.

CLARK & JONES AND A. & P. SPONSOR WEEKLY TEAS

BIRMINGHAM, Ala.—Sales Manager B. C. McCoy, Jr., of Clark & Jones, Inc., Kelvinator distributor here, has made an agreement with the Atlantic & Pacific Tea Co. of this city whereby the two organizations are holding weekly teas at the refrigeration distributorship for the women of Birmingham.

At the "Home-Makers' Teas," the women first play bridge, then witness a cold cookery demonstration given by Misses Odell Stewart and Earlene Hutcheson, home economists of the distributorship.

Auditorium on the second floor of the Clark & Jones building has a seating capacity of 400, and has been filled almost to capacity for the teas.

Utility Requires 5 Evening Calls Each Week

LOS ANGELES—Because a survey made by the Southern California Edison Co. here showed that 40 per cent of its electrical appliance sales were made after regular working hours, the utility now requires that its salesmen make at least five evening presentations each week.

The survey, made between January and August of last year, showed that the utility's 19 salesmen closed a total of 1,046 major appliance sales during the eight-month period, and that of this number, 634 were made during working hours, while 412 (40 per cent) were closed after 5 p. m.

Of the total, 402 (39 per cent) were made to housewives alone, while only 91 (8 per cent) were made to husbands alone. Remainder were made with both members of the homes present, according to H. C. Rice, appliance sales manager.

Six of the sales force were classed as "star" salesmen because of their longer selling experience; the other 13 men were recognized as Class B salesmen. The star salesmen made 570 of all sales made during the eight months. Of this number, 278 (49 per cent) were after-hour sales. Class B men sold only 134 units, or 29 per cent, after regular working hours, the survey showed.

Class A salesmen made only 26 per cent of their sales to housewives alone. Class B men made 54 per cent of their sales without husbands being present.

SALES SUPERVISOR

RIVERSIDE, Ill.—G. E. Brothers has been appointed sales supervisor of the Riverside Electric Co., General Electric dealer here.

MERCHANDISING LAW IN KANSAS INVALID

(Concluded from Page 1, Column 2) far in increasing the demand for their service. These activities, which were held by the court, were regular, legitimate, and within the constitutional rights of the corporations.

"With no feature of public welfare actually involved, the conclusion surely must follow that to deprive these plaintiffs of an implied power and privilege incidental to their general business is unreasonable, arbitrary, unjust, and oppressive," the opinion states.

Other individuals, firms, and corporations can engage in merchandising these appliances, but this particular class cannot. They are deprived of the equal protection of the law. We therefore conclude that the act is unconstitutional as being in violation of the fourteenth amendment of the constitution of the United States."

10,000 ATTEND COOKING SCHOOL IN WEST

LOS ANGELES—Ten thousand women attended the cooking school recently staged here by George Belsey Co., Ltd., General Electric distributor, the Los Angeles Herald-Express, and Safeway Stores.

To advertise the school, which was held in the Philharmonic Auditorium in the heart of Los Angeles, 100,000 handbills, carrying the name of the G. E. range and Distributor Belsey, were distributed. In addition, more than 100 in. of publicity for the range and distributor were obtained in the pages of the *Herald-Express*; and participation in the school gave the distributor exclusive representation on the stage.

2 INDUSTRIES FILE FAIR PRACTICE CODES

(Concluded from Page 1, Column 5) parties who can show that they have definite interest in that industry will be permitted to state their views.

Labor, industrial, and consumer advisory boards will work with the administrator or his deputy, to insure consideration of the code from all angles. Representatives of a special unit of the administration will be on hand to supply data or investigate facts presented by an industry's spokesmen if the administrator or deputy desires.

Officials have made it clear that the government will not set minimum wages for all classes of workers. It will, instead, endeavor to decide whether the wages provided by an industry's code are sufficient to provide a living for the laborers in question.

President's Approval

Having been approved by the deputy and the chief administrator, each code will then be sent to the President. After his approval, the code becomes an industry's official set of trade practices, and its provisions will be enforceable by law.

If an industry member does not abide by the terms of its code, the President may license other members of the same industry and refuse the dissenter the right to operate. It is not expected, however, that much use will be made of this measure by the President. Others less drastic will probably be more often employed.

National Recovery Board

A National Industrial Recovery Board, consisting mainly of cabinet members or their representatives, to pass upon the codes submitted by all industries was organized June 19.

At its first meeting, the committee agreed that its chief task should be that of promoting cooperation by industries in increasing employment, and in preventing price rises out of line with the increased wages of workers.

General Johnson has already appointed six assistants and directors to aid in applying the act's provisions to the fields of industry, labor, law, research, and labor advisory matters. Organization of the Labor Advisory Board and the Industrial Advisory Board has been completed, and selection of personnel for the Consumers' Advisory Board is under way.

Each of these boards will select a group of persons in its own field to be present at each code hearing in which those persons are interested. It will be the duty of these appointees to advise the deputy during the course of the hearing.

Procedure for Hearings

Having completed a hearing on one industry's code, each deputy administrator—six of which have been appointed—will then pass on to the hearing of another industry when the code of the first has been completed. In no case will a deputy be permitted to preside over the hearing of an industry in which he is personally interested, according to General Johnson.

When a deputy has conducted the hearing for one industry and moves on to another, he will leave in charge of the first a small force to handle matters arising from that industry's association with the government.

Advisory Committee

Duties of the Long-Range Economic Planning Committee, composed of business leaders called to Washington, D. C., by Secretary of Commerce Roper, are not primarily concerned with the workings of the Industrial Recovery administration.

Rather, the group will advise the Department of Commerce concerning the latter's operations, and will aid in the making of studies from which may emanate general policies for the conduct of various businesses over a long period of time.

Administrator Johnson's Military Plans Halted by President

INDUSTRY TO MEET IN DETROIT JULY 6

(Concluded from Page 1, Column 5) ties for the conference and to be host at dinner for the entire assemblage Thursday evening. The meeting will be held in the air-conditioned auditorium on the first floor of the Maccabees building at Woodward and Putnam Sts. in Detroit.

In preparation for the conference, G. M. Johnston, chairman, and Louis Ruthenburg, consultant of the Nema Refrigeration Division, met with the officers and headquarters staff of the association in New York City last week and drew up a tentative draft for the "Code of Fair Practice" which is one of the essential elements in the operation of the industrial recovery law.

The officers and a specially appointed committee of the association have already had considerable contact with the authorities in Washington, D. C., and have obtained a working knowledge of the government's plans for putting the law into operation.

As the result of these conferences with responsible officials, a fairly comprehensive impression can be given as to necessary procedure and requirements.

Misconceptions of Law

Reports from Washington, D. C., regarding the procedure which is being mapped out and the plans which are being made to coordinate the control of hours of labor, minimum wages, prices, etc. in various industries, indicate that business men generally have arrived at many misconceptions of the law. In spite of the enormous complexity of the problems involved in carrying out the broad purposes of the measure it appears that the authorities have a clear conception of their duties and a strong determination to avoid certain pitfalls and abuses which heretofore have been considered inseparable with government control of business.

Relation to Electrical Industry

Since it is the announced intention of the government to work largely through industry and trade associations and to depend upon the cooperation of business men to work out the details of the rules and regulations for their own control, one of the important questions for discussion at the Detroit conference will be the relation of refrigeration to the electrical industry as represented by the National Electrical Manufacturers Association. In communications which have been published in the News during recent weeks the question has been raised as to the suitability of Nema as spokesman for the electric refrigeration industry.

Evans Leads Fight

Thomas Evans, president of Merchant & Evans, Philadelphia, Pa., has taken the lead in opposing the industry's affiliation with electrical interests and in proposing that an independent association be formed. While the industrial recovery bill was under consideration by Congress and before its final passage, Mr. Evans proposed that ELECTRIC REFRIGERATION News call an industry conference in order to provide for a free expression of opinion and to insure that adequate attention be given to the interests of the small manufacturers in the field.

In answer to the proposal by Mr. Evans, the News pointed out the desirability of giving the Nema group an opportunity to present its case before any decision was made in the direction of a new organization. At the same time the News submitted the situation to the Nema Refrigeration Division at the regular meeting held in Hot Springs and advised that Nema call such a meeting for a full consideration of the industry's needs and requirements. The net result of the various proposals is that the meeting has now been called by Chairman Johnston and that the News will act as unofficial host.

THERE'S THE FEATURE THAT CLINCHES THE SALES



The SHELVDOR

U. S. PATENT 1898922

This new and exclusive patented feature is the most sweeping victory in the field of electric refrigerator sales

The Shelvador doesn't need explaining. One glance and the story is told. What a show-room and show-window feature! With the Shelvador you're a mile ahead of competition. You have something every housewife wants in her new electric refrigerator or is sorry she hasn't in her present one.

Increases "Usable" Capacity 50% Shelvador actually makes the "small" refrigerator "larger" by increasing the "usable" space. It saves the annoyance of "feeling around" for small, hard-to-find objects . . . puts them where they are easily reached.

MODEL D-35 NET contents — 3¹/₂ cubic feet. Shelf area—5 square feet. Overall Dimensions: Height, 50⁵/₈; Width, 23⁵/₈; Depth, 24¹/₂; Leg Height, 10¹/₂; No. ice trays, 2; No. ice cubes, 42.



\$89⁵⁰

MODEL D-45 NET contents — 4¹/₂ cubic feet. Shelf area—10.6 square feet. Overall Dimensions: Height, 56⁷/₈; Width, 23⁵/₈; Depth, 24¹/₂; Leg Height, 10¹/₂; No. ice trays, 3; No. ice cubes, 42.



\$99⁵⁰

MODEL D-60 NET contents—6 cubic feet. Shelf area—11.5 square feet. Overall Dimensions: Height, 57¹/₈; Width, 29¹/₂; Depth, 25¹/₂; Leg Height, 10¹/₂; No. ice trays, 3; No. ice cubes, 63.



\$130

ALL PRICES INCLUDE DELIVERY..INSTALLATION..ONE YEAR FREE SERVICE

Montana, Wyoming, Colorado, New Mexico and west, prices slightly higher.
The Crosley Radio Corporation - Cincinnati
POWELL CROSLEY, Jr., President
Home of "the Nation's Station" - WLW

CROSLEY

Electric
REFRIGERATOR
WITH SHELVDOR
U. S. PATENT 1898922

WASHINGTON, D. C.—Hugh Johnson, whom President Roosevelt recently appointed administrator to carry out terms of the National Industrial Recovery Act, is an "industrial corporal instead of a general," according to Paul Mallon, veteran Washington correspondent.

Writes Mr. Mallon:

"It seems the ex-General jumped into the coordinating business as if he was still running the army. He ripped the country into sections with his own pocket knife. He named old army pals as deputy assistant and administrators. Division chiefs were chosen without consulting any politicians.

"It was purely a one man show. That is it was until Mr. Roosevelt heard about it.

"That is the real inside reason why Mr. Roosevelt suddenly selected a committee from his cabinet to take charge of things. The bosses now are

Commerce Secretary Roper and Interior Secretary Ickes. Roper is handling the industrial setup offstage. Ickes controls the public works feature, although no one is supposed to know about it.

"Johnson is not permitted to turn around without asking them.

"The restraint is naturally irksome to him. He called a cabinet committee meeting recently to get authority to do something of no importance. Afterward he whispered to Roper that the arrangement was silly. He suggested they only call meetings on important matters.

Roper cautioned him about the president's orders. Johnson reluctantly agreed.

"If Johnson has any idea of resigning, he has suppressed it. As a good soldier he can take orders as well as give them. His personality somewhat resembles that of Dawes. He is an ideal man for his job."



MAJESTIC INVITES YOU

*To Make Yourself Comfortable Here Between Visits To
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**GRIGSBY-GRUNOW COMPANY, 5801 Dickens Ave., Chicago,
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Majestic
RADIO and
REFRIGERATION

General Johnson Issues Bulletin on Codes of Fair Competition

WASHINGTON, D. C.—In a bulletin issued June 20, General Hugh S. Johnson, administrator of the National Industrial Recovery Law, presented those principles by which the national recovery administration will be guided in its consideration of codes of fair competition submitted by trade associations, industries, and labor groups. Contents of the bulletin follow:

1. This bulletin is intended to inform all trade associations, industrial and labor groups how to proceed to secure the benefits of the National Industrial Recovery Act. In his statement upon the signing of the act the President said with reference to prompt submission of codes of fair competition:

"This organization is now prepared to receive proposed codes and to conduct prompt hearings looking toward their submission to me for approval. While acceptable proposals of no trade group will be delayed, it is my hope that the 10 major industries which control the bulk of industrial employment can submit their simple basic codes at once and that the country can look forward to the month of July as the beginning of our great national movement back to work."

This bulletin covers the procedure necessary to comply with the President's suggestion.

MAJOR INDUSTRIES TO RECEIVE PRIORITY

2. The national recovery administration will receive proposed codes at any time after this date at its office in the Department of Commerce building, Washington, D. C. Codes may be submitted by mail and will be promptly

examined and associations or groups submitting them will be given such suggestions as are appropriate for further action.

Consistent with the President's statement, the major industries will so far as practical have the first attention of the administrator.

As soon as the proposed code is put in proper form, after consultation with those submitting it, due public notice will be given of a date for a hearing on the code, and at such hearing reasonable opportunity to be heard will be given to all interested parties, including all affected labor groups, and representatives of consumer organizations, the trade associations or groups submitting codes and any essential minority thereof, other concerns not members thereof, and persons engaged in other steps of the economic process whose service and welfare might be affected by the approval of the proposed code.

This hearing will be held by a person designated by the administrator and there will be present, to advise that person, experts in the industry under consideration and the labor pertaining thereto, who will be chosen under the supervision of the Secretaries of Commerce and Labor, respectively. All other persons or concerns whose cooperation is desirable in connection with the proposed code shall be entitled to attend such hearings.

3. After such a hearing the proposed code may be modified at the suggestion of the administration or otherwise and as so modified, if it is agreed to by representatives of the association or group presenting it, and ratified by such association or group under such conditions as the administration may prescribe, it will be pre-

sented to the President for his approval or disapproval or suggested modification, and when finally approved by the President, it shall have the effect prescribed by the National Recovery Act.

REFINEMENTS OF CODES TO BE STUDIED LATER

TO BE STUDIED LATER

4. In order to carry out the President's suggestion as quoted in paragraph 1 and to effect an immediate reduction of unemployment and increase of mass purchasing power, trade associations or groups are invited to submit without delay a basic code covering only such agreements as are consistent with the policy of the act, respecting maximum hours of labor, minimum rates of wages and such means as each industry may find necessary to protect its constructive and cooperating majority from the wasteful and unfair competition of minorities or recalcitrants.

5. The act requires that certain provisions found in subsection (a) of section 7 shall be included in every code and therefore no application for the approval of any basic code will be received which omits or modifies these mandatory provisions, which are as follows:

Every code of fair competition, agreement and license approved, prescribed or issued under this title shall contain the following conditions:

(1) That employees shall have the right to organize and bargain collectively through representatives of their own choosing, and shall be free from the interference, restraint of coercion of employers of labor or their agents, in the designation of such representatives, or in self-organization or in other concerted activities for the pur-

Correction

Western Union
Philadelphia, Pa.

June 26, 1933.

Editor:

Will you please publish for me a correction in the second numbered paragraph in memorandum of suggestions for refrigeration code appearing in your last issue by changing the figure 25 per cent inserted in error to a question mark stop I am sorry the mistake occurred which was entirely my fault but I did not want to make any definite suggestion of factory profit percentage.

THOMAS EVANS.

pose of collective bargaining or other mutual aid or protection;

INITIATIVE MUST COME FROM INDUSTRY ITSELF

(2) That no employee and no one seeking employment shall be required as a condition of employment to join any company union or to refrain from joining, organizing, or assisting a labor organization of his own choosing; and

(3) That employers shall comply with the maximum hours of labor, minimum rates of pay, maximum machine-load of employees and other conditions of employment, approved or prescribed by the President.

6. It is not the function of the national recovery administration to prescribe what shall be in the codes to be submitted by associations or groups. The initiative in all such matters is expected to come from within the industry itself. Neither is it the purpose of the administration to compel the organization of either industry or labor.

Basic codes containing provisions respecting maximum hours of labor, minimum rates of pay and other conditions of employment, which are in themselves satisfactory, will be subject to approval, although such conditions may not have been arrived at by collective bargaining.

7. In preparing basic codes the following principles should be given consideration:

(a) Basic codes provisions relating to maximum hours may involve appropriate consideration of the varying conditions and requirements of the several industries and the state of employment therein. An average work week should be designed so far as possible to provide for such a spread of employment as will provide work so far as practical for employees normally attached to the particular industry.

(b) Minimum wage scales should be sufficient to furnish compensation for the hours of work as limited; sufficient, in fact, to provide a decent standard of living in the locality where the workers reside.

(c) Conditions of employment should contain necessary safeguards for the health and safety of the workers and for stabilization of their employment.

(d) The following principle emphasized in the President's statement should be recognized and adhered to:

"I am fully aware that wage increases will eventually raise costs, but I ask that managements give first consideration to the improvement of operating figures by greatly increased sales to be expected from the rising purchasing power of the public. That is good economics and good business."

"The aim of this whole effort is to restore our rich domestic market by raising its vast consuming capacity. If we now inflate prices as fast and as far as we increase wages, the whole project will be set at naught. We can not hope for the full effect of this plan unless, in these first critical months, and even at the expense of full initial profits, we defer price increases as long as possible."

In the drafting of codes, attention is especially directed to this suggestion by the President that the recovery administration can not be effective unless the consumer's buying power is protected. There will be full protection for the consumer. The codes should recognize the interest of the mutual aid or protection;

MUST BE REPRESENTATIVE OF ENTIRE INDUSTRY

8. At the hearings described in paragraph 2 every trade association or group proposing a code should be prepared to establish by evidence the requirements of section 3 (a), clause 1, of the act, which provides:

"That such associations or groups impose no inequitable restrictions on admission to membership therein and are truly representative of such trade or industries or subdivisions thereof."

And of section 3 (a), clause 2, of the act, which provides:

"That such code or codes are not designed to promote monopolies or to eliminate or oppress small enterprises and will not operate to discriminate against them, and will tend to effectuate the policy of this title."

9. It is the purpose of the act to encourage a voluntary submission of codes of fair competition and the procedure offered by these provisions for basic codes is intended to simplify and expedite this process. But in the event that codes of fair competition

are not voluntarily submitted, attention is invited to other pertinent provisions of the act.

It is provided in section 3 (d) of the act that the President upon his own motion, or if complaint is made, may after public notice and hearing, prescribe a code of fair competition for a trade or industry or subdivision thereof. Section 3 (d) reads as follows:

"Upon his own motion, or if complaint is made to the President that abuses inimical to the public interest and contrary to the policy herein declared are prevalent in any trade or industry or subdivision thereof, and if no code of fair competition thereof has theretofore been approved by the President, the President, after such public notice and hearings as he shall specify, may prescribe and approve a code of fair competition for such trade or industry or subdivision thereof, which shall have the same effect as a code of fair competition approved by the President under subsection (a) of this section."

MUTUAL AGREEMENTS TO BE ENCOURAGED

In this same connection, attention should be directed to the requirements of section 7 (b) and (c), which read as follows:

"(b) The President shall, so far as practicable, afford every opportunity to employers and employees in any trade or industry or subdivision thereof with respect to which the conditions referred to in clauses (1) and (2) of subsection (a) prevail to establish by mutual agreement the standards as to the maximum hours of labor, minimum rates of pay, and such other conditions of employment as may be necessary in such trade or industry or subdivision thereof to effectuate the policy of this title; and the standards established in such agreements, when approved by the President, shall have the same effect as a code of fair competition, approved by the President's order under subsection (a) of section 3.

"(c) Where no such mutual agreement has been approved by the President, he may investigate the labor practices, policies, wages, hours of labor, and conditions of employment in such trade or industry or subdivision thereof; and upon the basis of such investigations, and after such hearings as the President finds advisable, he is authorized to prescribe a limited code of fair competition fixing such maximum hours of labor, minimum rates of pay and other conditions of employment in the trade or industry or subdivision thereof investigated as he finds to be necessary to effectuate the policy of this title, which shall have the same effect as a code of fair competition approved by the President under subsection (a) of section 3.

"The President may differentiate according to the experience and skill of the employees affected and according to the locality of employment; but no attempt shall be made to introduce any classification according to the nature of the work involved which might tend to set a maximum as well as a minimum wage."

Under the foregoing provisions of the act if no code or agreement establishing standards as to maximum hours of labor, minimum rates of pay, and conditions of employment has been approved by the President, the President is authorized under the foregoing section 7 (c) to prescribe a limited code upon the basis of such investigations and after such hearings as he finds advisable.

(Signed) HUGH S. JOHNSON,
Administrator, National Industrial Recovery Board.

Approved by Daniel C. Roper, chairman; Homer S. Cummings, Harold L. Ickes, Henry A. Wallace, Frances Perkins, Charles H. March, Lewis W. Douglas, John Dickinson, executive secretary.

Harry Alter Returns From Western Trip

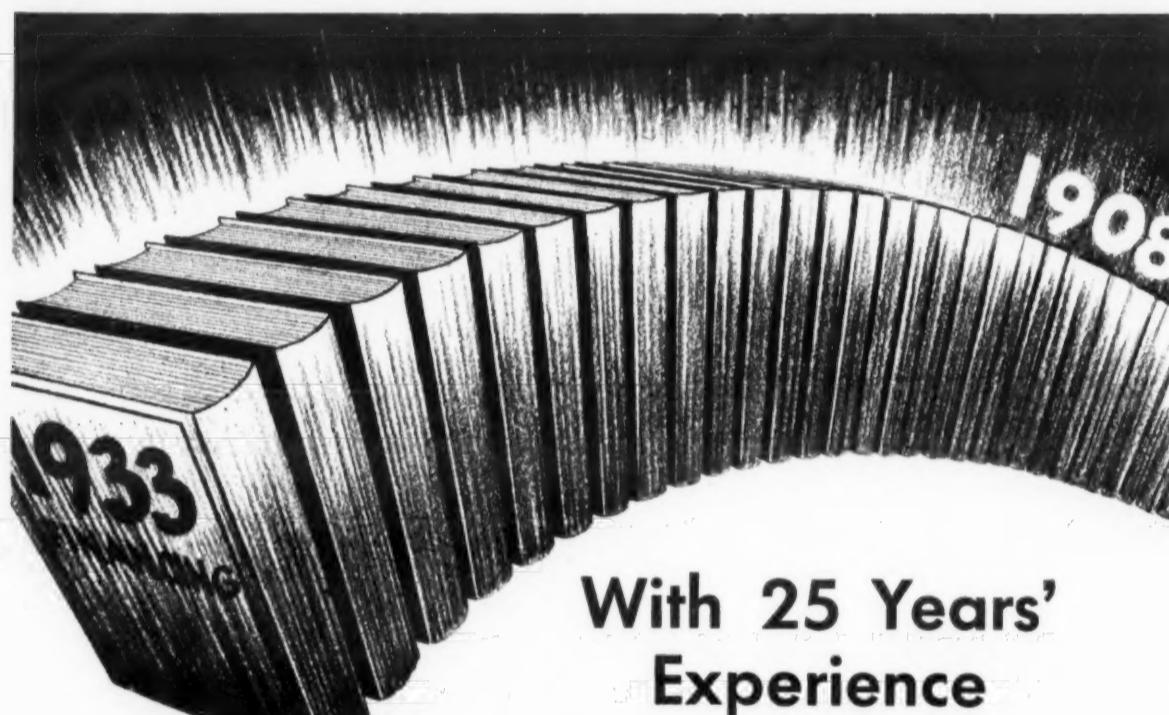
CHICAGO—Harry Alter, assistant sales manager of Grigsby-Grunow Co. here, has returned to the factory from a trip through the West, where he held sales consultations with Majestic refrigerator and radio distributors and their sales staffs. Included in his itinerary were Los Angeles, San Francisco, Sacramento, and Salt Lake City.

PFISTER SELLS 102 UNITS IN 3 MONTHS

NEW YORK CITY—Better than one Frigidaire a day is the selling record of Adam Pfister, salesman for the Long Island Light Co., Long Island, N. Y., who has a record of 102 Frigidaire sales between Feb. 1 and June 1.

ONE MAN MAKES ALL OF THE SALES IN TOWN

ALEXANDER CITY, Ala.—During the first five months of 1933, 13 refrigerators were sold in this town of 4,519 people. All of the units were Westinghouse models, and all of them were sold by one man—Brady Wattley, salesman for Duncan & Son, Westinghouse dealer here.



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C. I. T. has successfully financed the sale on credit of several billions of dollars worth of diverse products. In the mechanical refrigeration field its experience extends back many years; in fact some of the best known companies in the business have been clients of C. I. T. since the early days of the industry.

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175 UNITS SOLD IN SOUTHERN DISTRICT AFTER BANK HOLIDAY

JASPER, Ala.—The national bank holiday was in some degree responsible for sales of 175 electric refrigerators turned in by the Jasper branch of Alabama Power Co. in the utility's recent selling campaign, believes H. O. Yelverton of the district office here. Quota assigned to his territory was 24 refrigerators.

Faced with the problem of selling 24 boxes in an area composed largely of small mining towns, where Jasper, the largest town, had only 951 meters, and other places had as few as 31; with only seven display rooms outside of Jasper, the managers of which were expected to handle all phases of local utility operation as well as merchandising; and where 75 per cent of the population depends on coal mining for its living, officials of the utility had small hope of making quota.

"There are four small cotton mills located in the district," said Mr. Yelverton. "The business secured from this source, however, is negligible.

"The mining industry, which is the chief source of income for our customers, has been on a part-time operating basis for five or six years. In the past two years many of the mines have closed down altogether and the others have reduced operations to one and two days each week. For a mine to operate three days a week now is an occasion for rejoicing."

Shortly after the campaign started, news of a bank holiday in Michigan filtered down to Alabama. It did not seem vital enough, according to Mr. Yelverton, until other states began to follow suit. Alabama at last joined the procession, plunging refrigeration sales down to nil. The Jasper branch produced just one sale during this time of discouragement.

But with the reopening of the town bank, the attitude of the people changed almost overnight.

"People in our little town of Jasper, who didn't have a dime in the bank," declared Mr. Yelverton, "seemed to be just as happy as the bank president himself when the one remaining bank reopened. People were happy because the latest onslaught of the depression had been repulsed and now it seemed that at last the turning point of the battle had been reached."

Refrigeration sales took a sudden leap upward. The company began selling refrigerators at all hours of the day, and even on Sundays.

"For the first time in my 15 years of selling experience," Mr. Yelverton continued, "there were more refrigerator prospects than we could see. One local manager called and requested additional photographs of a certain model since he was unable to get the refrigerator itself and said he believed he could sell the pictures for 25 cents each. Meter readers, linemen, service men, and cashiers all turned in sales."

Asked to explain the 175 refrigerator sales made by his branch, the utility manager claimed he couldn't tell why they happened. Something that came out of the reopening of banks, a combination of confidence in the future, change of heart, and an acceptance of mechanical refrigeration, was his answer to the problem.

Mahony & Thompson Sell G. E. to Driver En Route to Train

BOSTON—It cost M. F. Mahony, merchandising manager for the electric refrigeration department of General Electric Co. in Cleveland, and W. L. Thompson, G. E. distributor here and "Man Hunt" winner, just \$1.20 to sell a refrigerator, during Mr. Mahony's recent visit to Boston.

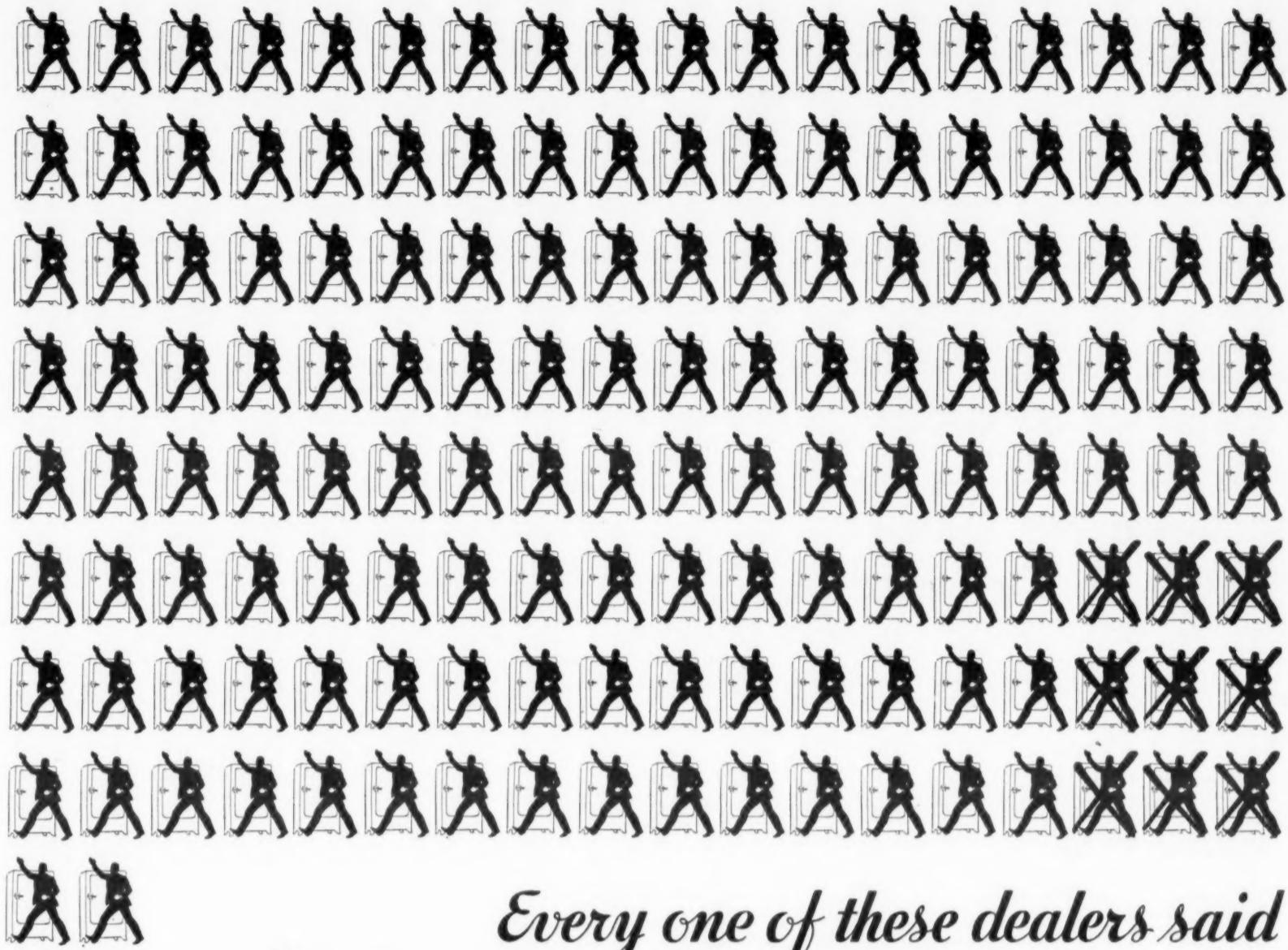
A taxi was called to take them from the Boston showroom to the train. On crossing the sidewalk to the waiting cab, they saw the driver looking earnestly at a Monitor Top in the showroom window.

"My wife has wanted one of those things for years, but we can't afford it," he said.

Whereupon the two high-powered sales executives went into their act, while the meter went on ticking off dollars and cents. By the time the dial registered \$1.20 the sale was made, the order signed, and the down payment made with delivery promised the following morning.

BANKRUPTCY ASKED FOR MAIZWOOD PRODUCTS

DUBUQUE, Iowa—Involuntary bankruptcy proceedings against the Maizewood Products Corp., manufacturer of refrigeration insulation, wallboard, and acoustical materials, have been instituted by three creditors of the firm. Action was taken in the U. S. District Court, Judge George C. Scott of Sioux City being named to adjudicate the matter. Operation of the plant was continued until recently when raw materials were exhausted.



*Every one of these dealers said
"Give us Performance Standards"*

Perhaps one of the unfortunate things about an electric refrigerator is that you can't tell what it's worth by examining its teeth, feeling its withers or stroking its ribs. You can't take it out for a run to hear its wind and watch its stride.

Price is no measure of performance when all features and all qualities are claimed at all prices. There's no gauge by which one refrigerator may be compared with another.

And evidently you dealers want one!

We were surprised when we asked 157 of you, to find that practically all of you would like to see something done about it. To get a cross-section we asked Electric Refrigeration News for the names and they turned out to be big and little dealers all over the country, in all sizes of cities, handling all makes at all prices.

With considerable vehemence 104 of them blamed the worst ills of the industry on price-cutting, misrepresentation and cheapness. Then 137 said, "The establishment of standards of real

performance would help maintain quality in the industry." Eighty-nine of this number believe this would prevent further price cutting. Eleven did not answer.

These are not our opinions—they are yours. But for months Dry-Zero has been urging the establishment of a usable measure of efficient performance and permanence. For months the Dry-Zero laboratory has been operating day and night developing information and establishing ratings for performance and permanence. Beyond all question it has been shown that every refrigerator will give better, more economical, more dependable service when insulated with Dry-Zero.

An opportunity to work with engineers of any manufacturer is welcomed. And the unique Dry-Zero laboratory is open to anyone in the industry interested in better refrigeration.

Dry-Zero Corporation, Merchandise Mart, Chicago, Illinois, Canadian Office, 687 Broadview Avenue, Toronto.

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ELECTRIC REFRIGERATION NEWS

The Newspaper of the Industry

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VOL. 9, NO. 9, SERIAL NO. 223, JUNE 28, 1933

Signed and Sealed— But Not Delivered

PHENOMENON is a pretty big word. But it seems to describe the situation prevalent today among manufacturers of electric refrigeration equipment; i. e., they are falling further and further behind in their race to build enough machines to fill the unprecedented number of orders flowing into their offices.

Westinghouse is more than 13,000 orders behind. Crosley has some 9,000 back orders piled up. Majestic is swamped with orders. So is Norge. The huge Frigidaire, Kelvinator, and General Electric plants—any one of which could probably turn out a million refrigerators a year—are having their vast capacities taxed for the first time in many moons.

Factories Behind in Production

For several years now we have been reading and hearing that the big problem of industry is distribution and not production, that the latter problem has been completely licked. All industry has to do is figure out a way to sell its goods as fast as it makes them. In the light of present conditions that presumption would seem unassailable.

Yet here is an industry which *cannot make its product as fast as it is being sold to the public!* And that, certainly, is phenomenal.

Field Stocks Worried Industry

Last year about this time almost the entire industry was worried about the magnitude of field stocks. Manufacturers had gone ahead on heavy spring production schedules, only to find that orders were by no means keeping pace. Some sales managers high-pressed unwanted numbers of refrigerators into the hands of recalcitrant distributors and dealers; some appointed droves of new retail outlets, and thus opened the door to chiseling and general chaos among dealers; some pushed shipments into the field on consignment; and still others moved surplus stocks through large retail outlets, like department stores, by cut-price sales.

This year manufacturers were resolved not to get themselves involved in any situation so tangled as the one which obtained last spring because of their optimistic production schedules (one of the leading manufacturers built 93 per cent of its 1932 output during the first six months, and only 7 per cent in the last half of the year!). They began the year cautiously, and made few commitments to suppliers.

Late Starting Season

The season didn't start until late. Many of the factories were entirely shut down. Sales managers concentrated on getting rid of 1932 stocks. Then came the deluge. After a very poor first quarter, the industry had a whopping big April, and a still larger May. All signs indicate that June will break more records.

It took a little time to warm up the cold and

silent plants. It took even longer to get materials and parts from suppliers who, not being forewarned, were certainly not forearmed. In short, the industry was taken by surprise.

Today the universal question is: How long will it last? Will the heavy selling season run through July and into August? Powel Crosley, Jr., believes that his Shelvador refrigerators will still be going strong in September. Ray Cosgrove, manager of the refrigeration department of Westinghouse, figures that the market will need a shot in the arm by the first of August in order to keep going at top speed. "Mike" Mahony, G-E merchandising manager, expects the season to be considerably extended, but says some of his distributors have their fingers crossed.

Most selling organizations, however, are refusing to look a gift horse in the mouth. The public wants electric refrigerators, and they are supplying that want as fast as they can get the goods. Some opportunists amongst dealers, unable to get merchandise from the manufacturers they have been representing, have purchased refrigerators for resale from almost any source they could tap.

Good Feeling in Industry

That the industry seems hell-bent-for-election gratifies almost everyone in the business. Not since 1930 and 1931 has there been so much general good feeling among refrigeration men. Apparently the fly-by-nights have flown into the outer darkness and disappeared, for the boom has been confined to the more substantial manufacturers thus far this year. With fewer fingers in the pie, there's a bigger cut for everybody concerned.

Because of the high spirits engendered by the industry's present health and prosperity, no doubt, the rifts and quarrels so prevalent and persistent last year seem to have quieted down. Never have the omens for cooperation among the refrigeration industry's widely diverse and variant factors seemed more favorable. The stage is apparently well set for the All-Industry Conference to be held July 6 in Detroit.

WHAT OTHERS SAY

THE GOVERNMENT AS A PARTNER

WHAT is the executive partner of industry going to do with his big stick? Shall the electrical industry rush to Washington and grab hold of the stick, either in fear or in expectation of having it used to its advantage, or shall it stay home and capitalize upon the present up-turn in business?

There is no necessity for precipitate action. More than 100 codes of practice have already been submitted to the administration or are ready for submission. The industrial recovery act is a labor act and the primary questions applied to each code will be: What is your minimum wage and your maximum hours of labor? Will you raise wages and will you employ more people under this code? Any industry that goes to Washington expecting to get approval of price agreements as a primary part of its code will be shown the door, politely but firmly.

Under these conditions and with a full recognition of the time required to administer the act for all industries there is no need for the electrical industry to be hasty in action or fearful of governmental interference. It is a relatively small industry and has splendid labor conditions. It needs more sales, and governmental intervention will not obtain them.

Manufacturers, wholesalers, and retailers should appoint a joint committee at once, however, to draw up a code for the entire industry. There must be unity in this code for all these parties and the code should be specific as well as supported by data before it is submitted to Washington for approval. There should be no delay in starting this work.

While this necessary work is going on to cooperate with the government and to carry out the act, the rank and file of the industry should go about their business and earn a greater prosperity. They should have no fear that drastic governmental interference will be had immediately so long as the industry continues to sell its markets and improve its standards of business conduct. Basic industries necessarily will serve as trial horses for the government to ride. In summary, therefore, it is our belief that the electrical industry should go to work at once to develop a sound and complete program for carrying out the far-reaching permissive powers of the act, but it should not permit the act to distract its attention from its markets or persuade it to rush to Washington with a hastily compiled and ill-considered program.—*Electrical World*.

LETTERS

Misunderstood on Test Procedure

Dry-Zero Corp.
Merchandise Mart, Chicago
June 23, 1933.

Editor:

I have read with interest the courteous response of Mr. Gordon Thompson, assistant chief engineer of the Electrical Testing Laboratories, to my comments on their suggested standard tests for electric refrigerator performance.

I note with pleasure the sincere desire evidenced to contribute toward the essential improvement of the industry's products. After all, it is only by such efforts that industries grow in stability as well as size.

Mr. Thompson and I perhaps misunderstand each other. He suggests, for example, that I may have overlooked the statement that their proposed test procedure "is designed to develop the essential features of performance at any given time," and that it does not include any test for durability.

I hasten to apologize to Mr. Thompson for my failure to make clear that this statement was not overlooked. It was and is, in fact, the crux of my entirely friendly criticism, because tests of refrigerator performance at any given time present only a fraction of the data that should be known. The fact the industry, its dealers, and the public want to know is—Will the efficiency disclosed at a particular moment continue; is this efficiency lasting, durable?

After pointing out that the E. T. L. test procedure discloses only performance at a specific moment and does not indicate how long such performance may be expected to continue, Mr. Thompson states that "durability tests may be devised with intensified deteriorating influences and so make it possible to get a significant result in a shorter time than would otherwise be possible." He intimates, however, that there are difficulties in setting up such a procedure that will be agreeable to all parties concerned. With this I certainly agree.

However, the Dry-Zero laboratory has been working on this problem for a year and a half. Considerable money and a great deal of time have been expended because we have felt that an accurate method of ascertaining the durability of a refrigerator is much needed by the industry at this time. The Dry-Zero laboratory is now ready to submit a procedure that we are satisfied will show within a brief, practical period—up to 90 days—the durability of a cabinet over a period of one or several years.

The data, the reasoning, and the physical laws involved in setting up this durability test procedure are now being released for publication. This information will, I think, modify some of the previous suppositions concerning the entry of moisture into refrigerator walls, and the effect of such moisture entry upon refrigerator performance.

I am looking forward to having Mr. Thompson's opinion on the Dry-Zero laboratory procedure, which I think may well be a milestone in the industry's development. It is possible that kinks are present that will need ironing out, but during the prosecution of this work, we have repeatedly checked both basic premises and results with noted physicists and engineers.

I would like to say that we would greatly enjoy a visit from Mr. Thompson and his associates to the Dry-Zero laboratory. They would, I believe, find the work being done there intensely interesting.

HARVEY B. LINDSAY,
President.

Consideration of Export Business In Industry Code

H. M. Robins Co.
120 Madison Ave., Detroit

June 22, 1933.

Mr. G. M. Johnston, chairman,
Refrigeration Division, N.E.M.A.,
c/o Universal Cooler Corp.,
Detroit, Mich.

Re: The Code and Overseas Business
It is respectfully suggested that in drafting a code to govern the policies of the refrigeration industry due consideration be given to the industry's overseas business.

A very large number of American refrigerators have already been sold abroad. For this accomplishment much credit is due to the initiative, courage, and pioneering spirit of the larger American manufacturers. As a direct result of their efforts the whole world is becoming conscious of the advantages of refrigeration in all its phases, and it is proper now to take steps to see that American industry gets its reward as the business grows.

For the most part, competition for this overseas market is at present strictly between American companies; in fact, exactly the same competition as appears in the domestic market.

Therefore, the same arguments for control of this competition apply as well to overseas as to domestic business. In addition, it is desirable that the American manufacturers put up a solid united front against encroachment of foreign competition, against the uneconomic tendency to transfer manufacturing activities to other countries, against unfair trade practices encountered in some countries which set up discriminations against American products, and against the usual very human practice common under all conditions of open competition, to play one bidder against another purely to beat down prices.

On the constructive side it is important also to establish certain uniform trade practices, such as service warranties and terms of payment, to establish and maintain the superiority of American made refrigeration products, to set up a high standard of business ethics as between American manufacturers and overseas buyers, to develop a corps of well trained sales representatives throughout the world who will understand equally well the technique of refrigeration and the temperament of their overseas customers, to make available quickly, accurately and detailed information regarding all phases of refrigeration, including household, commercial, milk and ice cream handling, truck refrigeration, air conditioning, ice making and cold storage.

To this end we suggest that if the code eventually developed for the refrigeration industry should follow the model submitted by the National Association of Manufacturers, there should be added to it under article VI, (Industry Regulations), section A (Marketing Code), either in lieu of division "I" or as an additional division "J," the following:

"Coordination, supervision, and direction of all activities concerned with the marketing of products in countries outside of Continental United States."

In order to have this matter properly explored with a view to advising the "Code Conference," it is suggested that a suitable committee be appointed by the chairman of the refrigeration division to prepare recommendations to be included in the conference agenda.

H. M. ROBINS,
President.

Vivid Description

Copeland Sales Co.

Mt. Clemens, Mich.

June 23, 1933.

Editor:

This morning I received my copy of ELECTRIC REFRIGERATION NEWS and, as usual, I always read George Taubenbeck's editorials. I want to comment on the one you have written this week about Chicago. In this, I believe you have excelled. You have given us a most vivid description of our second largest city, a mental panorama, humanistically described in a most interesting fashion.

I love Chicago. From time to time it has been my home and your interpretation of its industrial life, coupled with its natural resources and people, in part, with an element outside of our own social standing, yet strangely interesting in their own habits of living, is strictly in keeping with my own conception of Chicago.

Though metropolitan in its entirety, your visualization of this great city has unearthed "something more" in a metropolis than gigantic buildings of concrete and steel—a spiritual understanding which metaphorically speaking is the cable which unites one mass of people, separated by race, color, and creed, into one group of worthwhile citizens.

This editorial is most commendable and because of this, I believe it deserves a letter from one who is a constant reader of your column for, after all, in one respect people are very much alike—we like praise for those things which we do unusually well.

IRENE JARVIS MULLIGAN,
Advertising department.

Cooperative Show

George Belsey Co., Ltd.

General Electric Distributor

Los Angeles

June 13, 1933.

Editor:

The radio and refrigeration industry in southern California recently attempted to break the inertia that has kept sales low in the refrigeration business for so long by staging a refrigeration show to open the peak selling season. I am giving you full information below as it seems to me that this material may be of interest as material for ELECTRIC REFRIGERATION NEWS.

This Radio and Refrigeration Show was held May 14, 15, 16, and 17 in the Shrine Auditorium in Los Angeles, undoubtedly one of the two acceptable locations for such a show. It was scheduled to open the refrigeration season with a real splash.

The show was managed and promoted by the association of exhibitors which entirely eliminated promoter's profit and promotional expense. This resulted in great economy; for instance, we had four booths with aisles on all four sides of our section and the total space cost was \$210, about one-third of the cost of space in comparison.

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LETTERS

(Concluded from Page 10, Column 4)
ble shows of the past. By mutual agreement of the exhibitors, expensive decoration of individual booths was not allowed, resulting in another saving to each exhibitor and giving the entire show a very uniform and, as a matter of fact, a very pleasing appearance. There was a total of 86 booths, all of which were sold well in advance of the show for, of course, it was necessary for the exhibitors themselves to underwrite expenses.

The object of the show was, of course, to focus public attention upon radio and refrigeration with emphasis on the latter through concerted action of all factors in the industry in this territory. The second object was to bring prospective purchasers to the show where they had an opportunity to inspect all leading makes of refrigerators and to learn of the latest improvements. Every exhibitor in the show made an intensive effort to do actual floor selling, and to secure a list of prospects. Reports from various exhibitors state that sales at the show were satisfactory and that large prospect lists were built up.

Promotion of the show was accomplished in a very economical manner through the cooperation of all interested organizations. Each retailer had display banners in his store. More than 165,000 free tickets of admission were distributed through these outlets and through the public utilities in metropolitan Los Angeles; admission to the show without these free tickets was 25 cents. A limited amount of newspaper publicity was secured (no paid advertising) and almost all radio stations contributed spot announcements free of charge.

You can see from the above that there was practically no promotional expense involved. The total receipts amounted to \$3,067.10, consisting principally of rental of booths amounting to \$2,845. The total expense amounted to \$2,858.17, consisting primarily of the rental of the premises and the cost of erecting, lighting, furnishing, maintaining, and removing of display booths. The net profits were \$208.93. As stated above, there were no producer or organizer expenses and there were no salaries paid except to workers.

Attendance was exceedingly satisfactory considering the amount of promotional work that we did. It was as follows:

	Afternoon	Evening	Total
Attendance			896
Trade and dealer preview	1,600	5,800	7,400
May 15, 1933	1,980	8,460	10,440
May 16, 1933	2,564	10,518	13,082
Total	31,718		

The last night of the show, over 13,000 people were in the auditorium at one time. It was difficult this last evening, of course, to do actual sales work because of the extremely large crowd.

We are able to draw certain very definite conclusions from this refrigeration show:

No. 1—Any doubt that may have crept into our minds during the past two years regarding public interest in electric refrigeration was certainly dispelled, for almost 40,000 people attended the show and intense interest in electric refrigerators was evident to every distributor. There were surprisingly few curiosity seekers.

No. 2—A renewed trend toward quality merchandise was indicated for the majority of visitors with whom our men talked, at least, were more interested in the dollar for dollar value represented by our products than by the actual selling price. However, the Junior line received a great deal of attention.

No. 3—Our difficulty in selling electric ranges has led us to believe that there was very little public interest in this product, but the attention it received at the show and the specific questions asked by visitors regarding electric cookery promises to increase sales of this product with the return of normal times.

No. 4—In our booth we displayed two dishwashers, one of which was set up for demonstration. There were few moments during the entire show when there was not a crowd around the dishwasher. Several of our salesmen almost became hoarse as a result of their constant sales demonstrations of this amazingly interesting product.

No. 5—The large attendance, the high ratio of prospective purchasers and the actual sales results of this show indicated decided loosening up in buying in the territory.

Every exhibitor was highly pleased with the results he obtained from this expenditure and a similar show is tentatively planned for fall.

R. E. MANGAN,
Advertising manager.

Omitted

Grunow Illinois Co.

Chicago

June 15, 1933.

Editor:

I read with interest every issue of the ELECTRIC REFRIGERATION NEWS, but took particular interest in your issue of June 7, page 4, caption being "Guide to Chicago." You show a picture of "Chicago's Refrigeration Headquar-

ters." At the same time you mention that the Medinah Temple is one of the most ornate structures in the United States, but I was very much surprised that the person who wrote this description, not only neglected to mention the Grunow Illinois Co., distributor of Grunow refrigerators, but also left them out of the map. Our place of business is 501 N. Michigan Ave., Medinah Athletic Club building, facing both Michigan and Illinois St. We have possibly the largest indoor neon signs on Michigan Ave.

Naturally we are curious as to why we were omitted from your Chicago Refrigeration Headquarters map.

L. W. COHEN.

Editor's Note: Apologies from the editors for this error of omission.

Ice Industry Plan

George A. Wilson, Jr.
Consulting Engineer
502 Statler Bldg., Boston.

Editor:

In writing this letter I am giving you an unbiased analysis of the ice industry based on facts and observations since 1927, and trust that the information will prove valuable to the entire refrigeration industry.

The first step on the part of the ice industry to offset sales of mechanical units was taken in 1927, when the National Association of Ice Industries raised a \$200,000 general advertising fund at the Atlanta convention, but since then no definite plan or policy has been, or is, in operation. At each national association and state convention that I have attended problems have been discussed pro and con on ways and means of keeping the public sold on the use of ice and the unethical methods of the mechanical unit firms.

Of course the industry has made some notable strides as to employee training and merchandising of ice, together with other by-products of the industry and refrigerators, but with the rapid advancement of sales in mechanical units and prices down to new low levels this year, it is time the ice industry found a new way of delivering an old product—through efficient distribution.

Today there is not one ice refrigerator manufacturer who can turn out an ice cabinet and compete with the cabinet of the unit manufacturer in price or style. Many ice cabinet makers have gone out of business or cheapened their product at the expense of the ice company and efficiency of the line.

From my experience and knowledge of costs in cabinet construction, I can say that it is possible to give the ice industry a 6-cu. ft. food storage grade A cabinet that will retail at \$35—if some of the manufacturers will eliminate the hokum and high overhead selling costs. However, no matter how much money the ice industry spends on ice publicity or refrigerators, this year or next and so on, the fact still remains that more and more domestic customers will continue to buy and want mechanical refrigeration.

This is true because competitors have spent many millions in all sorts of publicity, telling and showing Mr. and Mrs. Public the modern way to buy refrigeration. So today 99 per cent of the families who can read and write want to buy or use mechanical refrigeration. In the past horse cars were replaced by steam and electric cars, speaking tubes gave way to telegraph, telephone, and radio, candles were outmoded by oil lamps, gas light, and electric light, automobiles replaced horses, sailing vessels retreated before steam and electric driven ships, airplanes are outdistancing all types of transportation. A \$35,000 plane can destroy a \$45,000 battleship and so in time a \$75 mechanical unit can destroy a billion-dollar ice industry.

Each and every new improvement in service to the general public has always been bitterly opposed by those who are directly interested in that particular field. It is fitting here to quote Arthur Brisbane, "If there is anything the matter with your business, investigate yourself and your methods." That's the advice of scientific business. Many individuals and businesses date back a long way, and won't accept any new ideas. They fail. Old ways mean ruin."

The immediate concern of the ice industry is in combating the ever on-rushing mechanical unit sales and developing its present and future markets in refrigeration service.

The question may well be asked, "What particular basis for appeal to present and future trade can the ice industry make?"

The answer may be found in the following plan, and as definite evidence of its practicability, the writer will guarantee any ice company that it can retain 75 per cent or more of its customers who are now or in the future considering purchasing a mechanical unit; also the plan will take any ice company out of the red.

Keep in mind that the ice industry is already established in every city and town throughout the United States, and that it is the most logical company to sell refrigeration service; for this is, after all, what the industry is selling, not ice. Ice is only the means by which it renders this service.

As every ice operator knows, delivery costs, including upkeep and

operating overhead, cut down profits considerably. If these expensive items could be eliminated a good profit could be made on the investment. Again keep in mind that the ice company is selling refrigeration service only and I believe will feel that so long as it can show a profit on its investment, it does not matter by what means that profit was produced.

For years the ice industry and mechanical refrigeration industry have been at odds; now is the time for both parties, including power companies, to unite in a common cause; and the ice industry has it in its power today to dominate the situation to the best advantage—by putting into effect the following policy.

Let us say an ice company in Atlanta has purchased 10,000 mechanical units as wanted and is now selling refrigeration service to 10,000 homes on a monthly pay-in-advance basis of \$5—with a credit for power cost of operation to the customer of \$1.50. The ice company receives \$3.50 net per month on each unit, as one would pay for his telephone service. These units will consume approximately 50 kw. per month. Total increase in power consumption is 500,000 per month to the power companies.

The following is a table of figures which show the possibilities of the project:

10,000 units average cost	\$70 each	\$700,000.00
Interest on above investment at 5 per cent	.....	35,000.00
Depreciation charge (10 per cent—high)	.....	70,000.00
Total power consumption per year, 6,000,000 kw. at 5 cents a kw.	.....	300,000.00
Total gross receipts refrigeration service per year	.....	420,000.00
Total gross profit per year	.....	\$315,000.00

The above amount would be in addition to regular ice sales made by the company.

The manufacturer's guarantee on these units would more than meet the

necessary stockholders or ice company's protection.

Benefits to be derived from the plan are:

1. It would place the ice industry in absolute control of refrigeration service.

2. It would return a big profit on the investment made.

3. Mechanical unit manufacturers and power companies would be united with the ice industry, thus presenting a united front for a common cause.

4. Free publicity would be given ice companies by unit manufacturers and power companies.

5. Present delivery costs would be cut.

6. Delivery trucks and their upkeep would be eliminated.

7. There would be no labor troubles.

8. After installation of this service bills could be rendered and collected in advance.

9. Business would be kept on a cash basis.

10. The ice industry would be able to recapture the apartment house trade in large cities where volume counts.

11. Ice industry would be on an equal footing with mechanical refrigeration as to merchandising and progressive methods.

12. All disputes between ice industry and unit manufacturers and power companies would be settled.

13. The ice industry would still furnish ice or mechanical refrigeration service, as wanted by the customer.

14. Peddler difficulties could be eliminated.

15. Investment would be spread over a large area, with small operating overhead and a small liability.

16. The price of outstanding ice company stock would be advanced and large dividends could be paid.

17. A customer would have free use of a beautiful modern cabinet with refrigeration service at no extra cost.

18. The customer would have no need to buy a mechanical unit or

bother with service.

19. The ice industry would be selling a service that the great public wants.

20. It would fill a demand at low cost.

21. Cooperative benefit to all concerned would result.

22. Amalgamation of the refrigeration industry would be an accomplished fact.

To what extent is it reasonable to assume that the ice industry would support this plan?

The answer may be briefly summed up—there is a tremendous market for this sort of refrigeration service. Apart from this there is the utmost need for consideration as to the holding of present business or customers already being served with ice, against the time when they will turn to mechanical units for refrigeration.

It would seem that this plan offers the ice industry both the means by which to hold its present customers and a way to reach out and build new business through the installation of mechanical refrigeration service. It offers the ice industry something with a strong, human, public interest appeal. It gives to ice companies the long-needed excuse to carry their message into the homes of millions of householders through the creation of a desire sponsored by the mechanical unit manufacturers and fulfilled by the ice industry.

This plan is the result of five years of intensive study on the part of the writer while in contact with the ice industry over a large territory. To secure the housewife's reaction to such a plan, 1,000 questionnaires were sent out. In almost every case the person filling out the questionnaire stated she would like such a service.

I am fully convinced that if the ice industry will give this matter serious consideration and will offer such a service to the public, they will see the merits of the above sales policy.

GEORGE A. WILSON, JR.



SPECIFICATIONS

Model LG-53

Width	Depth	Height
Overall Dimensions	26"	27"
Legs	13	Inches
Gross Capacity	5.22	Cu. Ft.
Net Capacity	4.94	Cu. Ft.
Shelf and Floor Area	8.69	Sq. Ft.
Ice Cubes	63	
Trays	One single and one double depth	
Exterior Finish	Lacquer	
Insulation	Two and one-half and three inches	

Model LG-72

Width	Depth	Height
Overall Dimensions	29"	29"
Legs	13	Inches
Gross Capacity	6.86	Cu. Ft.
Net Capacity	6.56	Cu. Ft.
Shelf and Floor Area	11.77	Sq. Ft.
Ice Cubes	84	
Trays	Two single and one double depth	
Exterior Finish	Lacquer	
Insulation	Three and one-half and four inches	

AMAZING LOW PRICES!

Uniform Temperature Control Needed By Packers, Wentworth Tells A.S.R.E. Convention

(Concluded from Page 1, Column 1)
fully cool until the ice ran out late in the afternoon.

A. W. Oakley, president of the society, welcomed the delegates at a noon luncheon today, and introduced Col. E. W. Wentworth as luncheon speaker.

Director of Armour's livestock research bureau and a veteran in the livestock industry, Col. Wentworth talked on "The Influence of Refrigeration in Changing Livestock Production Areas."

Col. Wentworth told how the livestock industry followed closely behind American pioneers; how Spanish settlers brought over cattle, horses, and hogs; how development of refrigeration permitted establishment of livestock production areas which would otherwise be practically useless; and how refrigeration makes it possible to transport and sell our fresh meats all over the country and in foreign markets.

Next needs of the packing industry are more uniform temperatures, better control of temperatures in meat coolers and refrigerated cars, and better air circulation from refrigeration equipment that is reasonable in cost, he said.

Technical sessions started right after lunch with Mr. Oakley presiding. First speaker was H. C. Guild, consulting engineer for H. M. Byers, Inc., manufacturer of metals for condenser tubing.

Mr. Guild traced the evolution of condenser design from early submerged types to newer tubular condensers which require less floor space, cost less to build, are easier to erect, and have the ability to produce lower head pressures.

C. T. Baker, consulting engineer of Atlanta, next described several applications of natural gas engines for driving ice-making refrigeration plants. Mr. Baker believes natural gas engine drives to be effective apparatus for reducing the cost of ice production, and cited figures to prove his contention.

A paper on "Fluid Flow-Pressure Loss Due to Flow of Fluid as a Criterion of Loss of Any Fluid" was then presented by Gene Edwards,

graduate student at the University of Illinois. Sponsored by Prof. H. J. Macintire of the same university, this highly technical paper showed that the friction of a fluid flowing in a pipe is calculable, by formulae, and that calculated values are very close to actual measurements by loss of pressure through the pipe.

It also pointed out that the practice of assuming that velocity varies as the square of friction is misleading because the exponent is actually between 1.75 and 1.90.

Explanation of Dr. Nathan's brewing system was given by Dr. J. C. Goosman of New York City, because of Dr. Nathan's unfamiliarity with the English language. Dr. Nathan had written the paper, and assisted in its presentation.

Briefly, the Nathan system incorporates a new treatment of wort and a different fermenting process which permits production of beer in 12 days instead of three months required for conventional breweries.

Further details of the Nathan system will be published in the next issue of ELECTRIC REFRIGERATION NEWS.

Homer King to Handle Copeland Units

TACOMA, Wash.—Homer King, Inc., distributor of household appliances and automotive equipment here, has taken over the distribution of Copeland electric refrigerators for this territory.

Homer King, president of the company, has been in business here since 1913 and recently moved his business to new offices and showrooms at 601 St. Helens Ave.

50,000 G. E. EMPLOYEES GET 5% WAGE INCREASE

SCHENECTADY, N. Y.—Effective July 1, a 5 per cent increase in wages will be paid the 50,000 employees of General Electric Co.

All General Electric employees throughout the country will benefit by the raise.

175,119 Household Electric Refrigerators Sold in May By 12 Companies; Highest Monthly Production In Industry's History

Reported by Refrigeration Division of National Electrical Manufacturers Association. Member companies: Copeland, Crosley, Frigidaire, General Electric, Gibson, Grigsby-Grunow, Kelvinator, Norge, Servel, Trupar, Universal Cooler, and Westinghouse.

HOUSEHOLD		World Sales	Factory, Branch, and Warehouse	U. S. A. INVENTORIES
Lacquer (Ext.) Cabinets with Systems	Quantity	Dollars	Quantity	Dollars
1. Under 4.00 cubic feet.....	1,858	93,732	883	49,020
2. 4 to 4.99 cubic feet.....	53,757	3,284,626	18,408	1,370,010
3. 5 to 5.99 cubic feet.....	14,976	1,046,196	7,545	532,330
4. 6 to 6.99 cubic feet.....	37,338	3,166,014	9,936	957,451
5. 7 to 7.99 cubic feet.....	9,213	853,555	6,310	630,206
6. 8 to 9.99 cubic feet.....	1,599	174,742	3,947	539,750
7. 10 to 12.99 cubic feet.....	150	31,395	1,820	332,833
8. 13 to 16.99 cubic feet.....	22	5,607	410	87,731
9. 17 to 24.00 cubic feet.....	5	1,801	234	60,184
10. Total Lacquer	118,918	8,657,668	48,493	4,559,515
Porcelain (Ext.) Cabinets with Systems	Quantity	Dollars	Dealers and Distributor	Quantity
11. Under 4.00 cubic feet.....	313	13,855	517	23,080
12. 4 to 4.99 cubic feet.....	6,113	466,773	2,100	172,470
13. 5 to 5.99 cubic feet.....	4,781	419,585	963	83,391
14. 6 to 6.99 cubic feet.....	18,897	1,867,524	3,429	353,885
15. 7 to 7.99 cubic feet.....	16,493	2,115,329	4,984	618,469
16. 8 to 9.99 cubic feet.....	3,810	527,432	2,045	283,864
17. 10 to 12.99 cubic feet.....	1,220	198,360	1,518	272,581
18. 13 to 16.99 cubic feet.....	538	104,717	3,338	439,941
19. 17 to 24.00 cubic feet.....	52	17,156	1,134	301,975
20. Total Porcelain	52,217	5,730,731	19,028	2,549,456
21. Total Lines 10 and 20.....	171,135	14,388,399	68,521	7,108,971
22. Separate Systems	3,119	131,429	5,170	193,282
23. Separate Household Low Sides.....	865	13,881	4,776	84,642
24. Total Lines 21, 23, and 23.....	175,119	.....	78,467	81,978
25. High Sides Under 1/3 hp.....	1,954	84,994	1,558	71,659
26. Cabinets—No Systems	85	5,111	20,859	866,507
27. Total Household .....	.....	14,623,814	.....	8,325,061
28. COMMERCIAL	.....	.....	.....	7,355,717
31. Water Coolers with High Sides.....	1,651	141,318	9,447	984,936
32. Water Coolers with No High Sides.....	90	4,583	666	31,713
33. Ice Cream Cabinets with High Sides.....	1,268	163,815	3,313	445,534
34. Ice Cream Cabinets with No High Sides.....	965	121,616	4,224	508,747
35. Milk Coolers with No High Sides.....	1	75	8	1,610
36. Room Coolers with High Sides.....	742	64,258	3,104	270,577
37. Room Coolers with No High Sides.....	9,809	904,937	9,002	986,639
38. Extra High Sides, 1/3 hp. and Up.....	12,768	21,874	1,614	3,614
39. Total Lines 31, 33, 36, 38, and 40.....	8,746	199,943	14,319	429,348
40. Extra Commercial Low Sides.....	173	40,598	.....	359,096
41. Miscellaneous Cases and Cabinets.....	40	3,180	110	9,948
42. Beverage Coolers .....	.....	1,644,323	.....	1,149,505
43. Totals Commercial .....	.....	16,268,137	.....	**12,504,253
44. Totals—Household and Commercial.....	.....	.....	.....	**8,505,222

*The total of the figure by sizes and kinds does not agree with the total figure shown namely \$12,504,253, because of the failure to supply the detailed information by all companies.

The number of companies reporting inventories at factory, branches, and warehouses was 10. The percentage of total sales of these 10 companies was 95.3.

**The number of companies reporting inventories of dealers and distributors was 9. The percentage of total sales of these 9 companies was 91.0.

Nema Sales by States For May, 1933

G. E. COMMERCIAL CASES USED IN HAWAII

HONOLULU, T. H.—W. A. Ramsay, Ltd., General Electric distributor in Hawaii, has made several installations of G. E. conditioned-air commercial refrigeration recently in stores throughout the islands.

Salesman Kumaishi of the distributorship sold display cases to two of the Marusan Stores, located at Palama and Moiliili. Krispy Krust Bakery of Honolulu purchased from the Ramsay company a D-54 and a DE-55 evaporator for remote installation. Another recent installation was a biological cabinet for Dr. Y. Oyehara, Waipahu, Oahu. Island newspapers, both English and foreign language, carried stories of the installations.

CASWELL OPENS BRANCH STORE IN DETROIT

DETROIT—Caswell, Inc., Michigan General Electric distributor, has opened a new branch retail salesroom at the corner of Washington Blvd. and State St. here.

An Ideal Coil Service Set-up

Now Over 40,000 Larkin Coils in Daily Use

K NOWING that you can get Coils quickly often speeds sales. LAR-KIN Original 100% Vertical Surface Aluminum Plate Coils can be supplied to practically every point East of the Rockies in from 12 to 24 hours.

At our Atlanta, Brooklyn and Chicago Warehouses we maintain stocks of 124 Standard Models and Sizes. Arrangements can be made through the manufacturers listed here so that you can use this quick delivery service.

WAREHOUSES

Brooklyn - Chicago

Omaha, Neb.

UTILITY SELLS 4,133 UNITS IN 8 WEEKS

CHARLOTTE, N. C.—A record of 4,133 electric refrigerator sales in eight weeks was established by the Southern Public Utilities Co., with headquarters here, during its spring Kelvinator campaign which opened April 3 and closed June 3 in all towns in the Carolinas served by the utility.

In this sales drive, employees of the utility were allowed to participate for the first time in the company's history. Fifteen hundred of them were enrolled as assistants, each receiving \$2 for each buyer spotted by them. Directing the campaign was the utility's Vice President J. P. Lucas and Kelvinator District Manager Carl Mitchell.

Highest ranking salesmen in the entire territory were H. V. Martin of Burlington, N. C., who sold 233 units; F. S. Snyder, Winston Salem, N. C., with 215 units; and J. P. Dunham, Salisbury, N. C., who sold 207 Kelvinators.

Eleven trips to A Century of Progress and 18 cash prizes were offered as prizes for those salesmen and employees producing best results during the drive's duration.

All of the utility's 11 home economists held Kelvinator demonstrations in the several hundred towns of the territory during the campaign. Mildred Seeber of Salsboro and Nellie Brownlie of Spartanburg each used motor trucks equipped as model kitchens for demonstrations in the area's smallest towns.

Kelvinator users in the utility's territory were offered \$5 for the name of any unlisted prospect sold during the campaign. Thirty-five thousand special broadsides were distributed to selected prospects, followed by a four-piece direct mail campaign. More than 180,000 pieces of factory-prepared literature were distributed in the area.

Approximately 400 employees of the utility company bought Kelvinators during the spring drive, according to Mr. Lucas. A number of meetings with salesmen and employees were held by Jack Taylor, Kelvinator field man, while the campaign was under way.

MIAMI VALLEY DEALERS FORM TRADE ASSOCIATION

DAYTON—Announcing its intention to establish a code of ethics for the merchandising of electrical and gas appliances in the Miami valley, an Appliance Dealers' Association was established here June 8 by local dealers.

Purpose of the organization is to assure the public of securing reliable merchandise through reliable outlets. Only responsible dealers with places of business apart from their residences will be eligible to join the association. Another membership requirement is that appliances of proved quality be handled.

R. R. Hollister was elected president, J. F. Parker, vice president, and K. Fitzpatrick, Jr., secretary and treasurer. The board of governors is composed of these officers with C. J. Morgan and J. R. Garrison.

Leonard Distributors Cited for Records

DETROIT—Leonard Refrigerator Co.'s distributor roll of honor, made public recently by R. I. Petrie, general sales manager, includes firms which have shown outstanding sales increases in 1933 over 1932.

Distributors which are exceeding all past records and their percentages of sales are as follows: J. H. Burke Co., Boston, 201 per cent; E. C. McKelvey Radio Co., Salina, Kan., 187 per cent; A. A. Schneiderhahn Co., Des Moines, Iowa, 165 per cent; Ballou, Johnson & Nichols Co., Providence, 156 per cent; E. S. & E. Co., Inc., Albany, 138 per cent; Brown Distributing Co., Atlanta, 136 per cent; and Spurrier's, Inc., Oklahoma City, 135 per cent.

SPARKLET'S, INC., CREDITORS HOLD FINAL MEETING

NEW YORK CITY—The final meeting of the creditors of Sparklet's, Inc., was held at 10:30 a. m. June 26 at the office of Robert P. Stephenson, referee in bankruptcy, at 32 Broadway here.

At the meeting the trustee's account was to be examined and if found correct all outstanding accounts were to be sold and applications for allowances were to be passed on.

FINAL ACCOUNTS FILED IN ICEBERG BANKRUPTCY

GARDNER, Mass.—Final accounts of receivers and trustees of the bankrupt Iceberg Mfg. Co. have been filed, and after deduction of administration expense, a final dividend will be paid to creditors whose claims are filed and allowed, according to Daniel W. Lincoln, referee in bankruptcy.

Special Air Conditioning Issue of ELECTRIC REFRIGERATION NEWS

July
12

FOR the last two years Electric Refrigeration News has been reporting the progress of air conditioning. Refrigeration distributors and dealers want and need this information. All of these worthwhile distributors and dealers are either now selling air-conditioning equipment or are making plans to add this line to their present activities.

Public interest in air conditioning is growing very fast, and is further stimulated by A Century of Progress exposition (1933 World's Fair) in Chicago. Visitors to the Fair are already coming home with the firmly implanted idea that air conditioning is practical and highly desirable. Their inquiries to local refrigeration dealers make it essential that you tell them what you have to fill this demand.

The July 12 issue will contain a complete directory of air-conditioning equipment manufacturers as well as a chart analyzing just what various devices on the market will and will not do. Added to this will be technical articles on various types of air-conditioning equipment, and descriptions of recent representative installations.

In other words, the July 12 issue will give the distributor and dealer a current resume on air conditioning to date. It will really give a compact reference medium which will be kept and used for some time.

To Manufacturers of Air-Conditioning Equipment

Use the July 12 issue to lay the ground work for strong and effective distribution which you need. Competition for the better distributors will be keen. Advertising to this group now will help you gain the recognition you need. It will help you make immediate contacts too.

Tell the worth while refrigeration distributors and dealers (the most logical sales outlets for air-conditioning equipment) what you have for the market.

To Manufacturers of Component Parts and Materials

The growing demand for air-conditioning equipment spells opportunity for new business. Compressor equipment, motors, controls, evaporators, tubing, metals, etc., will all be needed in quantity.

Use the July 12 issue to tell air-conditioning manufacturing executives and engineers who you are and what you have to sell to meet their requirements. Your advertising to this group of Electric Refrigeration News' most avid readers will help you build recognition for your products and immediate orders.

Advertising Forms Close July 8—Reserve Your Space NOW
Electric Refrigeration News, 550 Maccabees Bldg., Detroit, Mich.

Gas Refrigerators in N. Y. Apartments Use 2,500,000,000 cu. ft. Yearly

NEW LONDON, Conn.—Annual gas consumption of gas refrigerators in New York City apartment houses alone is estimated at 2,500,000 cu. ft., it was stated June 22 by N. T. Sellman, director of sales and utilization of the Consolidated Gas Co. of New York.

Mr. Sellman spoke at the joint New York-New England regional gas sales conference held here at the Hotel Griswold. He reported that 140,000 apartments in New York City are now equipped with gas refrigerators.

After reviewing the efforts of his company in introducing the gas refrigerator in New York City, Mr. Sellman said:

"During the year 1929 we installed 14,471 refrigerators, most of which went into new buildings. There were some retail sales, but practically none to old apartment houses which were later to become our biggest field.

"By 1930 it became evident that old buildings had to install automatic refrigeration if they were to compete with new buildings.

"This field then became so extensive that our wholesale division had to be divided into two groups—one dealing exclusively with new building work, the other group dealing only with existing buildings. The market for refrigeration was then extended to practically any apartment where the rental was \$20 a room or more," he said.

"During 1930 we made 28,955 installations, and before the year 1931 was over, the number of apartment house installations had become so large that we published a directory to advise prospective tenants that there were 65,000 apartments equipped with Electrolux refrigerators."

The company's refrigerator sales peak was reached in 1931 when 47,536 installations were made, Mr. Sellman said. During the three months of August, September, and October in that year, the utility installed 21,852 units, the peak month being September, when 8,583 refrigerators were installed.

"By 1932 the total number of installations in apartment houses had reached the point where a new renting directory was published, listing 100,000 apartments equipped with Electrolux refrigeration," he continued. He also said that installations in 1932 totaled 33,806.

Discussing the new air-cooled Electrolux, Mr. Sellman stated:

"We were somewhat concerned as to what the attitude would be towards water-cooled models after the air-cooled equipment was announced.

"There are many customers, however, who continue to buy water-cooled equipment. First, their buildings are already partially equipped with water-cooled boxes, and the landlords are hesitant about introducing any new improvement for fear that the tenants having the old equipment will want to change.

"Furthermore, there are certain space-saving models which can only be water cooled and some building owners continue to buy these units. Since introduction of the air-cooled refrigerator, we are still selling approximately 15 per cent water-cooled boxes."

Mr. Sellman concluded by saying that his company now has installed a few more than 4,000 air-cooled Electrolux refrigerators in New York City.

CODE OF ETHICS IS ADOPTED BY KANSAS CITY DISTRIBUTORS

KANSAS CITY, Mo.—To promote fair competition and stability in the business of selling electric refrigeration, 14 distributors in Kansas City have drawn up a code of business practice and have agreed to follow it in their own operations, with their respective dealers cooperating.

The code provides that no deceptive, misleading, or untrue advertising shall be used. Also that "disparaging or misrepresenting the equipment, output, reputation, stability, prospects or personnel of a competitor, or his ability properly to service the equipment he sells, is reprehensible and shall not be done."

'Special' Discounts

It provides further that no salesman or firm shall attempt to break down a sale or secure a contract from a customer who has definitely placed an order for an electric refrigerator.

No "courtesy" or "special" discounts, it rules, shall be extended except to religious and charitable institutions supported by public taxes. Such discounts shall not exceed 10 per cent, and shall apply on refrigerators to be used only by the institutions and not by their employees.

On the matter of trade-in allowances, the code provides for certain maximum allowances for old ice boxes on electric refrigerators of specified installed retail prices, as follows: up to \$100, no trade; \$100 to \$150—\$5; \$150 to \$225—\$10; \$225 to \$300—\$15; \$300 and over—\$25.

Where a dealer sells two or more lines of refrigerators, no distributor shall offer or give the dealers' salesmen any secret bonus or compensation to favor or push his refrigerators over those of a competitor. And no dealer shall permit his salesmen to take part in any such offer.

Additional Provisions

Further provisions are that:

"Dealers shall not accept any order offered them by a competitive salesman; and, in the case of such an offer, shall immediately notify the employer of the salesman. Dealers shall dismiss a salesman who, without the knowledge of his employer, offers an order to a competitive dealer.

"No distributor or dealer shall employ a salesman who has worked for another distributor or dealer, without consulting his former employer.

"No salesman shall in any way share his commission with a customer, or make a down payment or any portion thereof for a customer. Distributors and dealers agree to dismiss any salesman guilty of this practice and such salesman shall not be employed by any other distributor or dealer."

Distributors Adopt Code

Following are the Kansas City distributors who adopted the code, and agreed to enforce them in their own, and their dealers', operations:

Copeland Refrigeration Co., Copeland; Frigidaire Sales Corp., Frigidaire; Gille Mfg. Co., Mohawk; Glasco Electric Co., Crosley; Gueck & Co., General Electric; Goetze-Ryan, Inc., Sparton; Great Western Stove Co., Mayflower; Jenkins Music Co., Majestic and Ice-O-Matic; Mace-Ryer Co., Leonard; Midwest Grunow Co., Grunow; Moser & Suor, Inc., Norge; Richards & Conover Hardware Co., Kelvinator; Satterlee & Blue, Inc., Westinghouse; and Townley Metal & Hardware Co., Gibson.

Ramsey Sells 268.7% Of Quota

PITTSBURGH—Selling more than twice the volume allotted him, C. W. Ramsey of Grafton, W. Va., led the field in the spring Frigidaire campaign conducted by the Monongahela West Penn Public Service sales organization. Ramsey sold a total value of \$5,642, and, as his quota was \$2,100, he rolled up a record of 268.7 per cent.

The Panhandle division of the company finished first in the contest with a total of 147 per cent, while the Fairmont area, with Ramsey heading its list, was second with 139 per cent. All together a total volume of \$68,433 was scored.

LOANING STUNT BRINGS IN PROSPECTS

ST. PETERSBURG, Fla.—Salesman H. A. Groves of the General Electric dealership here, Webb & Morgan, Inc., recently worked out a new method of bringing in refrigerator prospects.

He inserted a classified advertisement in a St. Petersburg Sunday newspaper, offering to loan his G. E. refrigerator to a responsible individual for several months, provided good references could be given.

Monday morning he had 17 replies. His plan is to call on all who responded, as well as on the people whose names were given as references.

Write today for literature on the Leitner Bar Equipment built for mechanical refrigeration

M. Leitner & Co.

2322-24 Ogden Ave., Chicago, Ill.

G. E. & Cleveland Kroger Stores Hold Contest

CLEVELAND—Now in progress in this city and the territory surrounding it is an advertising and sales promotional campaign conducted jointly by the General Electric Co. specialty appliance sales department and the Cleveland division of the Kroger Grocery & Baking Co.

Since June 2, when the campaign opened, all patrons of the 330 Kroger and Piggly Wiggly stores in the Cleveland area have been receiving one vote for each 25 cents in purchases made at one of these stores. Each person taking part in the contest is registered at one of the 330 stores.

On July 29, the contest will close, and the Kroger-Piggly Wiggly patrons will turn in their total votes at the stores where they are registered. The patron having the most votes at each store will receive an HX-47 General Electric refrigerator. The person having the most votes in the entire territory will receive a G. E. all-electric kitchen.

Any person who does not wish, or is not able, to compete during the entire eight weeks of the contest, may—by accumulating 20 votes—secure from the manager of his Kroger or Piggly Wiggly store a certificate worth \$5 on the purchase of some General Electric home appliance.

For publicizing the contest, Kroger and Piggly Wiggly customers have been circularized with folders giving rules and details of the competition and carrying information on General Electric refrigerators and all-electric kitchen.

Participants are permitted to secure vote certificates from friends not registered in the contest.

FRIGIDAIRE WORLD'S FAIR EXHIBIT SPACE DOUBLED

CHICAGO—Because the number of visitors at the General Motors building at the World's Fair has been much larger than was anticipated, the 281-ft. exhibit of Frigidaire Corp. has been enlarged to double its space.

During the first 21 days of the fair, according to Frank R. Pierce, sales manager for Frigidaire, more than 500,000 persons were clocked by checkers stationed at the entrance to the exhibit.

The pedestrian traffic problem made it necessary to revamp the exhibit, with the result that the entire east wing and the south observation promenade now are devoted to display of Frigidaire products.

The Little Theater in the General Motors building has been jammed to the doors every day for the last week, due in part to the fact it is completely air conditioned, according to Mr. Pierce.

He claims that a check of the numbers visiting the Frigidaire exhibit shows that one out of every three persons entering the gates of A Century of Progress visits the display.

CANADA KELVINATOR MOVES TO NEW OFFICES

MONTREAL, Quebec—Kelvinator of Canada, Ltd., has recently established new offices and showroom in the Gatehouse building, at 630 West Dorchester St. here.

MIDSUMMER & FALL CAMPAIGN PLANNED BY WESTINGHOUSE

MANSFIELD, Ohio—Midsummer-and-fall advertising and selling plans of the Westinghouse refrigeration division are being presented to Westinghouse distributors in the eastern part of the United States by five representatives of the division's headquarters here.

R. C. Cosgrove, manager of the refrigeration division, conducted a meeting in Chicago on June 22. Clyde Moran of the merchandise advertising department is holding meetings with distributors in St. Louis and Kansas City this week.

Roger Bolin of the same department met last week with members of the St. Paul (Minn.) distributorship, then joined Mr. Cosgrove on June 26 in East Springfield, Mass., for a meeting of distributors in the northeastern territory. Messrs. Cosgrove and Bolin are meeting today (June 28) in Philadelphia with distributors of the middle-Atlantic district.

Western representatives of the Westinghouse refrigeration division will meet with distributors in the west coast territory on July 3 in Los Angeles, on July 5 in San Francisco, and at another meeting on July 7.

June 19, central district distributors met in Mansfield with Mr. Cosgrove, Mr. Bolin, and S. H. Pittman, merchandise advertising manager, to hear sales plans presented.

At this meeting, P. Y. Danley, central district merchandise manager, presented the Danley trophy to H. M. Moock, president of the Moock Electric Supply Co. of Canton, for making the greatest percentage above quota in central district refrigerator sales during the Westinghouse "Turn Your Own Corner" campaign which ended June 10.

S. AFRICA MARKET FOR REFRIGERATORS IMPROVES

DAYTON—That increasing numbers of electric refrigerators may be shipped to South Africa from the United States was indicated by J. W. C. Kittleson, managing director of Kittleson & Rees, Ltd., Johannesburg, South Africa, representative there for Frigidaire, when he visited the Frigidaire plant last week.

Mr. Kittleson based his statements on the fact that there has been a steady, though gradual, increase in imports into South Africa since that country abandoned the gold standard last December.

Mr. Kittleson declared that financially South Africa is in a much better condition than most other countries, due to a beneficial premium on gold.

Four million dollars' worth of gold is mined weekly, and is shipped to London and sold, resulting in a favorable balance for South Africa, since the stabilization of the South African pound on a parity with the pound sterling.

"From the moment that we went off the gold standard," said Mr. Kittleson, "there was a noticeable improvement. Cost of living did not increase as much as the extra premium on gold, giving a wider spending margin for the people. At the same time, the shares market showed an immediate rise which was reflected in a general increase in business."

NEWS

EXTRA

NEW BEER COOLER OFFERS BIG SALES OPPORTUNITY

EXCLUSIVE FEATURES, LOW PRICES ATTRACT BUYERS

Here it is—the beer cooler you've waited for. Consider its new features—its handsome appearance—its reinforced all-steel construction—its amazing capacity for cooling 84-degree beverages to 38 degrees in exactly 30 minutes. No wonder the Super-Fast offers an outstanding sales opportunity.

The Super-Fast is designed and built by experts. It is the lowest-priced quality cooler on the market. There are nine models—six mechanical and three ice refrigerated. Capacities range from 60 to 192 twelve-ounce bottles. Constant temperature is maintained day in and day out—never a trace of "skunk" beer.

THE SUPER-FAST



The Super-Fast Model M-192, shown above, is as handsome as it is efficient. Cools 192 twelve-ounce bottles in sweet water bath. Attractively chromed brass hardware (rust-proof). Can be purchased for less per day than ice. Costs only few cents a day to operate. One of nine outstanding Super-Fast models. Latest type mechanical unit, fully enclosed.

Excellent sales opportunity for distributors and representatives throughout the country. Desirable territories now open. Act today.

WRITE, WIRE OR PHONE
ELECTRIC BEVERAGE COOLER CO.

421 South Delaware Street • Indianapolis, Indiana

335 New Dealers in 35 States are Appointed by Leonard

DETROIT—Three hundred and thirty-five new dealers, located in 35 states, have recently joined the Leonard field organization, it was announced by R. I. Petrie, general sales manager of the Leonard Refrigerator Co.

By states, the new dealers are as follows:

Alabama—T. H. Formby Co., Piedmont; Goodwater Drug Co., Goodwater; and C. W. Lewis Furniture Co., Tuscaloosa.

Arkansas—Murfreesboro Hardware Co., Murfreesboro; Bridges Drug Co., Corning; Boyd's Store, Piggott; I. E. Harris Lumber Co., Wynne; Lloyd Myers, Forrest City; Paragould Auto Parts Co., Paragould; and Parkin Furniture Co., Parkin.

Arizona—Day & Montanye, Tucson.

California—El Monte Furniture Co., El Monte; J. W. Morrow, Davis; Walnut Creek Electric Co., Walnut Creek; Kahn & Kelville, San Francisco; Frank H. Whitney, Willits; W. J. Peterson, Turlock; and Bob Murray's Hardware Co., Merced.

Connecticut—Central Electric Service Co., Bridgeport; Erickson & Carlson, Inc., New Britain; Wayside Furniture Shop, Milford; Harry D. Noble, West Haven; Gilbert Furniture Co., Norwich; and Stuart Crafts, Southington.

Georgia—Miller & Green, Washington; Robinson Furniture Co., Monroe; J. J. Hagedorn Co., West Point; King Furniture Co., LaGrange; Whittle Battery Service, Augusta; Stubbs & Hogg, Cedartown; Frank H. Moxley, Wadley; Wright & Edwards, Suwanee; Gentry Furniture Co., Rome; Lithonia Drug Co., Lithonia; Lewis Hardware Co., Waynesboro; Cummings & Long, Cartersville; Robinson Furniture Co., Winder; Clifton Adams Electric Co., Milledgeville; H. E. Lowe Electric Co., and Empire Furniture Co., both of Macon; and C. W. Jordan, Ashby St. Pharmacy Co., J. J. Haverty Furniture Co., Carroll Furniture Co., Rhodes Wood Furniture Co., and Barnes, Inc., all of Atlanta.

Illinois—Elmhurst Furniture Co., Elmhurst; Harmon & Settle, Benton; Louis L. Bellett, Cartersville; W. R. Saxby, Litchfield; Rene Morget, Christopher; Cohen Furniture Store, Pana; Decatur Music Shop, Decatur; C. W. Hirsch, Highland; Williamson Motor Co., Nashville; Marshall Field Co., Oak Park and Evanston; Johnson Motor Co., Glen Ellyn; Rakow Brothers, Dundee; H. F. Heineman, Huntley; Mercer Lumber Co., Evanston; Chicago & West Towns Co., Cicero; and Deimel Brothers Furniture Co., H. R. Radio Co., Conrad Brothers, Hotel Equipment Co., A. A. Vesely Furniture Co., L. Brunner & Son, and Devon Appliance Shop, all of Chicago.

Indiana—F. C. Dils, Lawrenceburg; Sanitary Grocery Co., Ossian; E. L. Claghorn, Indianapolis; Karl Van Devanter, Veedersburg; Ray Friedersdorff, Burnsburg; and Court House Furniture Store, Terre Haute.

Iowa—Carroll Radio Shop, Carroll; A. D. McQuillin Co., Fort Dodge; George Hardware Co., Grinnell; Eli N. Nelson, Blairsburg; H. F. Ferbitz, Jewell; Swedlund & Senksen, Stratford; Floyd Weber, Ackley; H. H. Nazett, Eldora; Gelhorn Auto Co., Steamboat Rock; Wilson Hardware Co., Hubbard; Varland Brothers, Radcliffe; Bushman & Long, Alden; Fry Auto Co., Reppy; Jesse Smith & Son, Clarion; John H. Ewinger & Son, Burlington; Abbott & Son, Marshalltown; and Shyken Furniture Co., Council Bluffs.

Kansas—Train Brothers, Lindsborg; McKelvey Radio Co., Salina; Smith Music Co., Fredonia; Madison Battery Co., Madison; Stewart Electric Co., Anthony; Bartholomew Furniture Co., Augusta; E. J. Gramley Plumbing Co., Medicine Lodge; Victor's Radio & Electric Store, Parsons; Fitzgerald Hawkins, Beloit; Hart Lumber

& Grain Co., Randall; H. M. Crowl, Hardner; Hawkins Electric Co., LaCrosse; H. C. Leonard Music Co., Abilene; Crawford & Miller, Lyons; and Peacock & Soile, St. Louis.

Maine—Central Furniture Co., Bangor. Maryland—Sol's, Inc., Western Furniture Co., Dumbler Brothers, W. T. Littlepage, Jr., & Co., Moore & Westendorf, Inc., John J. Skruch, and Howard Furniture Co., all of Baltimore.

Massachusetts—A. E. Lamoureaux, Wareham; Chelsea Hardware Co. and Bernstein Electric Co., both of Chelsea; Codman Radio Co., Dorchester; William S. Lodge Co., West Roxbury; Medford Specialty Sales Co., Medford; Sumner L. Redlon, Middleboro; Louis R. Bowen, New Bedford; O'Connor's News Store, North Easton; H. Spungin, Northampton; Lennox Beach, Longmeadow; Globe Furniture Co., Dorchester; Joseph Rosengard, Haverhill; Huron Ave. Auto Supply & Hardware Co., Cambridge; Roxbury Battery Co., Roxbury; Bloomberg Furniture Co., Lynn; Highland Auto Supply Co., Newton Highlands; Denholm & McKay Co., Worcester; Columbia Hardware Co., Jamaica Plains; Early Radio Service, Salem; A. Simons & Sons, Framingham; Daniel J. O'Donoghue, West Somerville; Dorgan Electric Co., South Boston; E. Waldron, Revere; A. L. Thayer & Sons, Whitman; Norwood Furniture Co., Norwood; Lawrence Furniture Co., Lawrence; Gaumon Brothers, Lowell; J. J. Plotti, Dorchester; Clinton Radio Co., Clinton; C. B. Faith Co., Everett; and A. Marks Co., Joseph C. Affanato, C. C. Harvey Co., Arthur McArthur Co., Houghton & Dutton Co., Daniels Furniture Co., and Arvedon Brothers, all of Boston.

Michigan—R. Brogan Sons, Emmett; E. J. Foster Co., Grass Lake; Point Motor Sales, Ironwood; Sorenson Furniture Co., Grayling; Harris & Whyte, Pinconning; Thomas Elevator Co., Palms; Maytag Saginaw Co., Saginaw; Chesaning Hardware Co., Chesaning; Moore Maytag Co., Ann Arbor; R. D. Malcolm Music House, Flint; Anderson McClelland, Sault Ste. Marie; Pickford Telephone Co., Pickford; F. A. Diebold, West Branch; Rechlin Hardware Co., Bay City; A. B. Ball, Mason; Vredevoogt Brothers, Grand Rapids; Maytag Flint Co., Flint; Valmasai Brothers, Monroe; J. O. Rutherford Refrigerator Sales & Service Co., Plymouth; Lapeer Hardware Co., Lapeer; J. Art Lovell, Dexter; Bishop Young Furniture Co., Bay City; J. George Discher & Sons, Saginaw; and Tuttle Electric Shop, Tawas City.

Mississippi—A. Gressett Music House, Jackson; Rice-Pappeneimer Co., Meridian; and Woodruff Furniture Stores, Hattiesburg.

Minnesota—Mill Furniture Co., South St. Paul; Reese Furniture Co., Winona; Central Radio Supply Co., St. Paul; Prairie Oil Co., Blooming Prairie; Len Thole Radio Co., St. Paul; and Hazel Park Hardware Co., St. Paul.

Missouri—John Parks, Jr., Steel; Modern Service Station, Kennett; Arl J. Dillman & Sons, Inc., Caruthersville; M. C. Abbott, Malden; V & E Co., Eldon; and C. F. Faulkner, Marionville.

Nebraska—McCauley-Targey Co., Novelty Repair Co. and State Furniture Co., all of Omaha; A. H. Norwood Co., Oakdale; Hackney Electric Co., Fremont; Syracuse Auto Co., Syracuse; Hervey Brothers, Tecumseh; Beyer's Service, Bridgeport; and Reiter Furniture Co., Hartington.

New Hampshire—L. A. Hutchinson, Milford; Hubert Coal Co., Concord; C. H. Austin, Inc., Nashua; Radio Electric Shop, Derry; Allen Drug Co., Hanover; and McNeils Drug Store, Lebanon.

New Jersey—Wolfson, Inc., Bayonne; Reliable Radio Co., Newton; Harris & Jaffey, Peterson; John A. Kozusko, Perth Amboy; M A Z Electric Co., Hillsdale; Jacobs Brothers, Harrison; Manhattan Furniture Co., Passaic; and O. P. Dickerson, Rockaway.

New York—Hoosick Electric Co., Troy; Harris & Lane, Inc., Belmont; John J. Brady, Victor; Edward Keifer, Northport, L. I.; Harry Goldstein & Sons, Eastport, L. I.; Remling Brothers, North Tarrytown; J. L. Baeder, 400 East 198th St., Bronx; Griffin Electric Shop, Malone; Mc-Kenna Brothers, Westbury, L. I.; W. J. Wicks, Bayshore, L. I.; Henry F. Huettner, Hicksville; Drumm's Electric Shop, Hancock; Floyd Decker, Kerhonkson; Robert C. Michel, Ellenville; Washer Service Shop, Rochester; F. W. Bush, Penn Yan; Corey & Hill, Atlanta; Haskins Drug Store, Granville; D. A. Pulter Estate, Canajoharie; W. M. Marvin & Son, Elizabethtown; Clifford J. Carroll, Eaves-on-the-Lake; P. C. Kern's Sons, Buffalo; Master Music Co., Niagara Falls; William Ewald, 6515 Myrtle Ave., and Hagen & Helmers, 5503 Eighth Ave., both of Brooklyn; Reubert Piano Co., 375 Bleeker St., Bailester Electric Co., Inc., 95 Chambers St., and Philip Olson Co., 2 West 46th St., all of New York City.

Ohio—College Corner Hatchery, College Corner; Turner Motor Co., Wilmington; Julius O'Krent Furniture Co., Cincinnati; Harry Brown, Bridgeport; Saunders-Eberle Auto Co., Springfield; City Radio Shop, Bryan; Rummel & Freckle Hardware Co., Conroy; Vernier-McLaughlin-Probeck Co., Archbold; Joseph Gieringer & Sons Co., Miamiomia; and William H. Herr, Prospect.

Oklahoma—Johnson Furniture Co., Ardmore; and Gambill Furniture Co., Clinton.

Oregon—Earl C. Mack Electric Service, Loco Oil Burner Sales, and Alberta Furniture Co., all of Portland; Radio Music & Supply Co., LaGrande; Gross & Hargis, Roseburg; and Cottengim Electric Shop, Redmond.

Pennsylvania—Paul S. Spaar, Chapel; Homewood Radio Laboratory, Homewood; Bellwood Furniture Co., Bellwood; William A. Drumm, Spangler; Hadesty Hardware Co., Tamaqua; Orr's Garage, Pittsburgh; Snyder Garage, Conway; Deft Devices Inc., Altoona; A. G. Gabosch, Pittsburgh; Samuel Lanken, Inc., Philadelphia; Levy & Gross, Harrisburg; Bodine Hardware Co., Bradford; Rearick & Miller, Martinsburg; Roaring Spring Department Store, Roaring Springs; and Liner's Furniture Co., Pottsville.

Rhode Island—Donat Guillebault, Oak Island; J. T. O'Connell, Long Wharf, Newport; M. Auger Furniture Co., Woonsocket; Bissonnette Brothers, Manville; J. B. Archambault, West Warwick; and the Boston Store, Providence.

South Carolina—C. H. Camp, Greenwood; Maxwell Brothers and McCollum, Anderson & Jordan Radio Shop, both of Charleston.

South Dakota—Home Furniture Co., Mitchell; Shriner Johnson Radio Inn, Sioux Falls; and H. J. Hermanson, Dell Rapids.

Tennessee—Hollis Garage, Wilson Furniture Co., Sam Fortas Mfg. Co., and Armstrong Furniture Co., all of Memphis; Freeman's Music Shop, Martin; Hooper Viers, Brownsville; Guy-Townsend Hardware Co., Jackson; J. H. Biggers & Sons, Selmer; Elizabethon Hardware Co., Elizabethon; H. L. Kaylor, Knoxville; W. M. Lee & Co., Jonesboro; Wright Hardware Co., Sweetwater; Sam Riley's Garage, Mohawk; P. H. Quillan, Bulls Gap; and Laminack & Roberts, Grossville.

Texas—McLellan Service Station, Thornton; One Two Four Electric Co., Hillsboro; S. W. Allen, Standard Furniture Co., Walter N. Graham, J. D. Harmon, Earl W. Culum Co., and Phipps Brothers, all of Dallas.

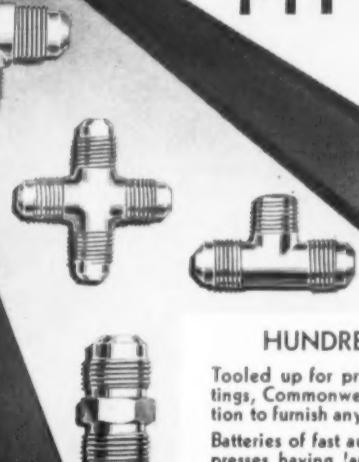
Virginia—W. L. Porter & Co., Galax; Home Hardware & Furniture Co., Norton; Estes Hardware Co., Cosburn & Harry J. Segal, and Star Furniture Co., both of Richmond.

Washington—John Peterson, Rochester.

Wisconsin—Noll Piano Co. and G. A. Butter Co., both of Milwaukee; Miller's Furniture Store, Kewaskum; Gates Electric Co., South Milwaukee; Vogelsang Furniture Co., Manitowoc; A. Hansen Furniture Co., Eau Claire; Zamka Furniture Co., Milwaukee; W. J. Harper, Peshtigo; Brumm Service Station, Middleton; William A. Hopp, Plymouth; Klode Furniture Co. and Hardware Shop, both of Milwaukee; and Johnson & Hill, Wisconsin Rapids.

Wyoming—Midwest Commissary, Midwest.

SEEPAGE PROOF PIPE AND TUBE FITTINGS



HUNDREDS OR MILLIONS?

Tooled up for production of highest quality fittings, Commonwealth Brass Corporation is in position to furnish any quantity, invariably from stock. Batteries of fast automatics, forging and trimming presses having large capacity plus a plant completely equipped in every other particular, make Commonwealth the logical source of supply for discerning manufacturers and service depots.

Every fitting is 100% inspected—every tube seat protected in shipping—each and every fitting is as efficient as fittings can ever be.

25 years experience in this industry qualifies us to serve it, and you.

Send for our catalog No. 36, fully descriptive.

BUILT
RIGHT
TO
STAY
TIGHT

COMMONWEALTH
BRASS CORPORATION
COMMONWEALTH AVE. AND G.T.R.R.
DETROIT

Saturday Buying Nets Savings of 26.7%

CALIFORNIA UTILITY OPENS SALES DRIVE

ATLANTA—"Saturday is Savings Day—If You Own an Electric Refrigerator," is the title of a new sales folder being issued salesmen of the Georgia Power Co. here as a result of investigations carried on by the home service and merchandising divisions of the utility.

Equipped with a typical menu for a family of six prepared by Miss Fern Snider, home service director, two members of her division were sent to Atlanta food stores with instructions to purchase all the perishables listed on their menus—first, at week-day prices, and second, on Saturday, at week-end prices.

Savings resulting from week-end prices in one case were 26.7 per cent, and in the other, 26.8 per cent.

The folder contains the two menus, list of the perishable foods purchased, contrasted prices, and savings on the various items. Salesmen are urged to use this document as evidence that preservation of foods in an electric refrigerator will enable the housewife to buy perishables at lower prices.

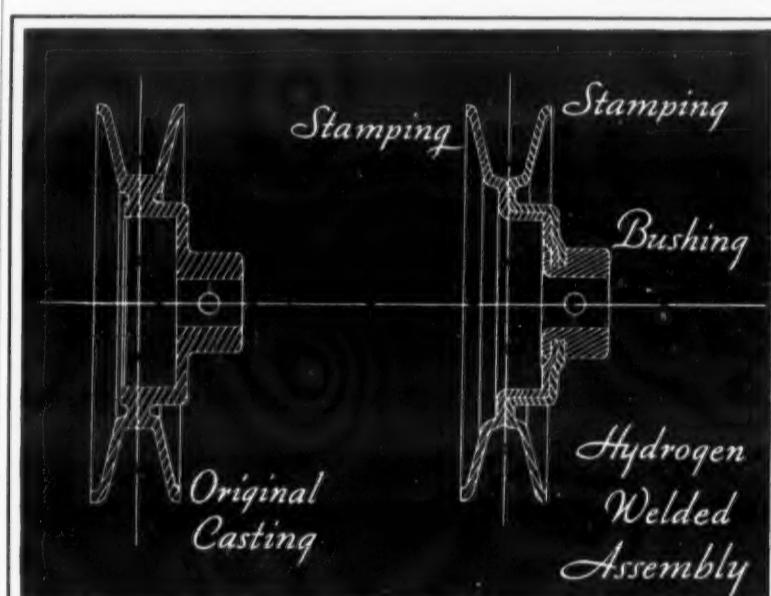
66 SALES MADE IN 3 DAYS BY 4 UTAH SALESMEN

SALT LAKE CITY—Sixty-six sales of General Electric refrigerators, 22 out of the first 43 being for cash, were turned in at the end of three days' work recently by Salesmen Tribe, Child, Williams, and Shumway of Utah Power & Light Co. in the Ogden division.

At about the same time, Mr. Hogan, salesman in the utility's Preston division, sold 11 refrigerators in 16 working hours.

PITTSBURGH—More than 240 Crosley Shelvador electric refrigerators were sold in this territory through efforts of Anchor Lite Appliance Co., local distributor, during the week of June 5-10, according to C. R. Betts, sales manager of the company.

Although shipments from the factory are received almost daily, the distributorship had more than 180 refrigerators on back orders June 17.



Design Your Products for Assembly by HYDROGEN ELECTRIC WELDING

ONE of the pulleys shown above was machined from an expensive casting; the other was assembled from two simple inexpensive stampings and a screw machine bushing, welded into a solid piece by a single trip through the Bundy Hydrogen-Electric-Welding furnace. The welded pulley is not only lighter and stronger, but its cost is far less.

The magic of Copper-Hydrogen-Electric-Welding may be applied to practically any product manufactured from iron or steel. The parts emerge from the furnace absolutely scale-free both inside and outside.

The Bundy engineering department will be glad to cooperate in adapting your designs to the Hydrogen-Welding process; to show you how you may achieve greater strength, lighter weight, better appearance, and important savings in labor and material. Parts may be furnished to Bundy machined for a snug fit; or Bundy will furnish complete welded assemblies to your specifications. Send us your blue-prints for quotations.

BUNDY
TUBING COMPANY
4815 Bellevue Ave.
Detroit, Mich.

BOSTON—Closing their May sales campaign, all salesmen of the Wetmore-Scott Co., Westinghouse refrigerator distributor here, met June 1 at the Hotel Kenmore to receive their awards and to see some of their staff promoted from the rank of senior salesman to master salesman. Frank W. Atwood, sales promotion manager, presided at the meeting, while Newell R. Tripp, sales promotion manager, presented prizes to winning salesmen.

ENGINEERING

NEW COILS DESIGNED BY CHICAGO CONCERN

(Concluded from Page 1, Column 1) process to form a return bend with $\frac{1}{4}$ -in. tubing on as small as $1\frac{1}{2}$ -in. centers without distortion of the tubing.

The large return bends reduce friction and pressure drops of refrigerant through the coils, and permit operation of the coil at high gas temperatures, with reduced food dehydration and better operating pressures for the compressor.

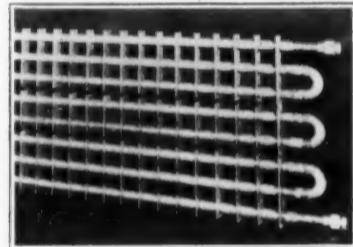
Another feature is use of a rectangular "continued fin" with two passes of refrigerant tubing through each fin, instead of just one fin being fastened to each tube as in the Bush individual fin coils which Mr. Krackowizer handled for several years before he started manufacture of his own coils this last spring.

For this method of construction he claims a good rate of heat transfer and speeded drip-off of moisture condensed on the fins because the drops of moisture gain enough speed in flowing down the fin (due to its increased height) to drop right off the bottom.

Fins are separated on the tubing by small rectangular spacers punched out at right angles to the fin, and arranged unsymmetrically so that as the coil assembler places alternate fins in the coil-making machine 180 degrees from the adjoining fin, he permits each spacer to butt against the solid part of the next fin (adding rigidity to the completed coil), Mr. Krackowizer points out.

An intimate contact between fins and the tubing is secured by flaring the fin through to carry the tubing.

Hum-E-Fex



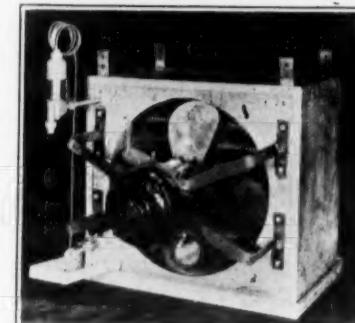
Finned coil for display cases, etc. Note full-size return bends.

Tubes are expanded into the fins by a special coil-making machine developed by Refrigeration Appliance engineers. Sagging of the coil or separation of fins is prevented by clamping fins of a coil together with aluminum tie-straps. Suitable mounting brackets are also furnished.

Various sections of a coil are assembled into one common end-plate of hot-galvanized steel, flared inward for the tubes to pass through. Return bends are set into the end-plates and fused to the tubes and end-plates by a special semi-hard solder (melting point 491° F.). All tubing connections are silver soldered.

All coils are tested at 350 lbs. of air

Fan-E-Fex



Forced convection cooler for produce cooling.

pressure under water, and completely dehydrated before shipment, Mr. Krackowizer states.

The Hum-E-Fex line of coils built by the company includes those for display cases, grocery boxes, etc., and is furnished in plain copper tubing, or copper tubing with brass fins. Tubing is of $\frac{1}{4}$ -in. size, giving a large primary wetted surface, he explains.

When the coil is intended for overhead installations, fins are provided on part of the tubing to agitate the air in the refrigerator. For brine, carbon dioxide, or ammonia refrigerants the Hum-E-Fex coil is manufactured with steel tubing. Steel coils are acetylene-welded, and hot-galvanized after fabrication. Copper coils are electro-tinned before fabrication.

Sur-E-Fex coils are used for gravity circulation purposes in cooling meat coolers, storage rooms, etc., and employs copper tubing with aluminum fins for methyl chloride, sulphur dioxide, and freon refrigerants, or steel tubing and fins with construction similar to the steel Hum-E-Fex coils for the other refrigerants. Some of Mr. Krackowizer's customers prefer steel coils for methyl chloride installations, he remarked.

Another evaporator designed by the company is the Fan-E-Fex forced convection cooling unit for cold storage rooms, produce cooling, and air conditioning. This is built in copper and aluminum for small-machine refrigerants, and in steel for ammonia, carbon dioxide, and brine.

Fan-E-Fex has a 860 r.p.m. motor, a housing of Toncan metal, Detroit Lubricator's thermostatic expansion valve, and suitable hangers.

A good technical performance, rather than price, has been the chief aim in designing the coils, Mr. Krackowizer declares, with the result that his list prices are comparatively high. A large primary surface has been a principal factor in securing a low pressure drop of refrigerant passing through the coils.

Thus 1-in. tubing is used with $3\frac{1}{2}$ -in. fins, $\frac{1}{4}$ -in. tubing is used with $3\frac{1}{2}$ -in. fins, $\frac{1}{4}$ -in. tubing with $2\frac{1}{2}$ -in. fins, and $2\frac{1}{2}$ -in. fins, and $\frac{1}{4}$ -in. tubing with $1\frac{1}{2}$ -in. fins.

Coils are available in copper and aluminum, all copper (electro-tinned after fabrication), copper and brass (electro-tinned), all steel (hot-galvanized), and for display purposes in stainless steel.

REGISTRATION DENIED FOR 'FRIGIDIZED FISH'

U. S. Court of Customs and Patent Appeals

Frigidaire Corp. v. Nitterhouse Bros. No. 3,075. Decided Feb. 20, 1933.

Trade-Marks—Opposition—Appeal

Where the Patent Office dismissed an opposition but held that the applicant's mark is descriptive and therefore not registrable and applicant did not appeal. Held that the appeal taken by the opposer raises a moot question and said appeal is dismissed.

Appeal from the Patent Office. Dismissed.

Mr. Charles H. Potter and Mr. Ralph E. Parker for Frigidaire Corp.

Mr. Owen Harrison Spencer for Nitterhouse Bros.

Graham, P. J.:

The appellee filed an application in the United States Patent Office on Nov. 16, 1928, for registration of a trademark used by it in connection with the sale of foods and ingredients of foods, said mark being the words, in block type, "Frigidized Fish." No claim was made for the word "Fish" except in connection with this mark.

The appellant, Frigidaire Corp., filed its opposition to such registration. The opposition was based upon the alleged fact that the appellant had been engaged in the interstate sale of refrigerating systems and elements since September, 1918, and had used in connection therewith the trade-mark "Frigidaire." The notice of opposition alleges that confusion in trade will result from the registration of the name of the mark "Frigidized Fish," and will result in financial injury and damage to the opposer.

The Examiner of Interferences held that the mark "Frigidized Fish" was descriptive, and could not be registered. He further held that the opposer had not set out this ground of opposition in his notice and that, therefore, said notice should be dismissed.

The appellant appealed. The commissioner held, in brief, that the goods produced by the appellant, and those of the appellee, upon which the mark "Frigidized Fish" was to be used, were not goods of the same descriptive properties, and that, therefore, the appellant could not, under the law, oppose the registration of the same. The opposition was dismissed. The commissioner further held that the proposed mark, "Frigidized Fish," was and is descriptive, and was not entitled to registration.

From this decision of the commissioner the appellant has brought the case here, and now seeks the judgment of this court upon its right to make opposition to the proposed registration, and questions the unfavorable decision of the commissioner on that point. The appellee does not appeal.

As we view the matter, the case is in now moot. All that the opposer could have sought in his notice of opposition was to defeat the registration of the proposed mark. Such registration has been denied. Therefore, irrespective of the right of the appellant to bring such opposition proceedings, and as to we expressly reserve judgment, there is no statutory relief which appellant may receive in this proceeding, which has not already been adjudged by the commissioner. The question of the descriptiveness of the mark of the appellee is not involved, for the appellee has not questioned this decision by appeal.

It follows that the appeal should be and is hereby dismissed. This is in harmony with our judgment in *Tower & Sons v. United States*, 20 C.C.P.A. (Customs)—, T. D. 46,131, and cases therein cited. It is also sustained by the practice of the Court of Appeals of the District of Columbia, as stated in *Dunlap v. Bettmann-Dunlap Co.*, 57 App. D. C. 351, 23 F.2d 772, 367 O.G. 237.

This case is clearly distinguishable from *Celanese Corp. of America v. Vanity Fair Silk Mills*, 18 C.C.P.A. (Patents) 998, 47 F.2d 375, 409 O.G. 6, as will appear from the facts stated therein.

Appeal dismissed.

KELVINATOR EXPORTS FOR TWO MONTHS INCREASE

DETROIT—Shipments of Kelvinator refrigeration equipment to foreign countries in the two-month period from April 20 to June 20 were greater by 102 per cent than those for the same period of last year, and gained 39 per cent over shipments for the previous two months, according to E. H. Wilcox, Kelvinator export manager.

The company's exports for the first eight months of the present fiscal year exceeded total shipments to foreign countries for all of last year, he said.

Commenting on this increase in his company's export business, Mr. Wilcox said, "There is no doubt but that foreign distributors are taking advantage of the present opportunity to buy more merchandise while their currencies are worth more in relation to the dollar."

Air-Conditioning Problems Discussed By Heating Engineers

(Concluded from Page 1, Column 2)

the university on temperature gradient observations in a large heated space.

F. C. Houghten, director of the A.S.H.V.E. research laboratory, and J. L. Blackshaw, research engineer at the laboratory, discussed indices of air change and air distribution, with special reference to comparison of CO_2 concentrations as a means of determining air distribution uniformity.

Samuel R. Lewis, consulting engineer of Chicago, addressed the society on "Testing and Rating of Air Cleaning Devices Used for General Ventilation Work." He first enumerated the various methods which have been used for determining the amount of dust in air, and pointed out their disadvantages.

"Is it not now apparent that dust in air is of such extreme variability that a limited determinator for rating air filters is impracticable?" Mr. Lewis asked, and then suggested that an agreement be reached upon tests to be used for rating the efficiency of air-cleaning devices "by some non-proprietary scheme . . . within the dust ranges commonly encountered in ventilating systems."

Describes Own Apparatus

Remainder of the engineer's address was devoted to a description of apparatus used by him in testing air-cleaning devices for their dust-removal possibilities. He stated that any device which will stop a dust aggregate similar to one composed of 50 per cent (by weight) powdered lampblack and 50 per cent (by weight) bituminous coal ashes which will pass a 200-mesh sieve, will be suitable for most air-cleaning purposes.

Before the close of the first day's session, H. C. Murphy, chairman of the committee on atmospheric dust and air-cleaning devices, presented the present draft of the "A.S.H.V.E. standard code for testing and rating air-cleaning devices used in general ventilation work."

Describes Pipe Sizer

L. A. Cherry, mechanical engineer of the Industrial Planning Corp., Buffalo, described a pipe sizer for determining the sizes of pipes and of restricting orifices in a hot water heating system, in the first address of the second session.

How the eupathoscope, a device developed by the Building Research Board of England, has been used for measurement of the performance of direct radiators and convectors in terms of equivalent temperature was discussed by Prof. A. P. Kratz of the University of Illinois, Urbana, Ill.

Research Data

The data given by Prof. Kratz were gathered during a research project carried on at the University of Illinois by the speaker, Prof. A. C. Willard, head of the university's department of mechanical engineering, and Prof. M. K. Fahnestock, research man from the same school.

The next paper presented dealt with tests of convectors in a warm wall testing booth, and was prepared by Profs. Kratz and Fahnestock, and E. L. Broderick, a research assistant in mechanical engineering at the University of Illinois.

A.S.H.V.E. standard code for testing and rating concealed gravity type radiation (hot water section) was presented before the society by R. N. Trane, chairman of the committee in charge of drafting the code.

First speaker of the last session was F. B. Rowley, director of the experimental engineering laboratories at the University of Minnesota. He presented the findings of a group of research workers on the heat conductivity of wood at climatic temperature differences.

Study of Ionized Air

Next paper read gave the findings of research conducted at Harvard University's School of Public Health in cooperation with the research laboratory of the A.S.H.V.E. The paper was prepared by Harvard's Prof. C. P. Yaglou, with C. D. Brandt, research fellow, and L. C. Benjamin, technician, assisting.

During the research project, the effect of ionized air on 60 persons in a total of 141 experiments was studied. The subjects were exposed for an hour or more to air containing from

5,000 to 1,500,000 ions per cubic centimeter, after the persons had rested for one or two hours in normal air. It was explained that normal air contains from 50 to 800 small ions per cubic centimeter.

Subjection to ionized air appeared to accelerate the physiologic processes in individuals having naturally subnormal processes. But those persons whose physiologic activity was above normal apparently had these processes decreased when subjected to ionized air, the research workers found. When taken out of the ionized air, the person's physiologic activities soon became as they had been before.

"Measurement of the Flow of Air Through Registers and Grilles" was the subject of a paper presented by Prof. L. E. Davies of Chicago's Armour Institute of Technology. In it, he discussed an investigation made to determine the characteristics of the anemometer—a device for measuring air flow—and the ways in which it may be used for practical applications.

Last paper of the convention was one prepared by F. C. Houghten, director, and Paul McDermott, research engineer, of the A.S.H.V.E. research laboratory at Pittsburgh, on carbon monoxide distribution in relation to the heating and ventilating of a one-floor garage.

Officers Nominated

During the convention, the society's nominating meeting named the following men for offices in the organization, the election to take place at the next general meeting in January:

President, C. V. Haynes, Hoffman Valve Co., Philadelphia; vice president, John Howatt of the Chicago board of education; second vice president, Prof. G. L. Larson, University of Wisconsin, Madison; treasurer, D. S. Boyden, Boston Electric Illuminating Co., Boston.

At a meeting of the society's committee on nomenclature, it was recommended that the organization use the symbol "Mbh" (1,000 B.t.u.s per hr.) for general use in indicating the rate of heat transfer, applicable to either heating or cooling.

It was decided at the convention that the next meeting will be held Feb. 6, 7, and 8, 1934, in New York City. Meeting place has not yet been decided upon, but it was announced that there will be an exhibit of heating, ventilating, and air-conditioning equipment at the Grand Central Palace during the convention.

FILTRINE WATER COOLERS INSTALLED IN HOSPITAL

NEW YORK CITY—Complete circulating drinking water systems using Kelvinator and Filtrine equipment have been installed in each of six buildings comprising the Veterans Hospital unit located in the Bronx, according to A. Cadwell, commercial manager of Kelvinator Sales Corp. here.

Six Filtrine model M-40-R 40-gal. storage water coolers and six Kelvinator model WFB-252 condensing units supply a total of 180 gals. of water per hour to 36 drinking fountains by means of circulating the water through cork-insulated pipe lines.

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Methods of Synchronizing Results Of Tests with Kitchen Use Developed by Dry-Zero

CHICAGO—How long an electric refrigerator cabinet will function efficiently under kitchen conditions in any section of the United States now can be forecast accurately by synchronized laboratory tests, according to Harvey Lindsay, president of Dry-Zero Corp.

Such forecasts are made possible by the Dry-Zero laboratory's development of a method of synchronizing the results of "speeded-up" laboratory tests with the effects of normal kitchen use.

The laboratory can now compress, without distortion, the effects of any period of use in any locality into from one-fiftieth to one-fourth of the actual time. It can reduce a year in New Orleans into 85 days, or by increasing the severity of the test can compress it to 60 days. A year in New York can be duplicated in two weeks or less.

Forecast Accurate Results

"There no longer need be doubt about what's going to happen to any electric refrigerator cabinet after one year or ten years of service," declares Mr. Lindsay. "I believe the formula and procedure worked out by our laboratory will give results as accurate as though the refrigerator had been in actual normal service in the place and for the time specified."

"There no longer need be any guess-work about how any material or type of construction will stand the gaff. Now we can get the answers accurately and quickly. There is no longer the least necessity for trying things out on the public. I believe this is such an important development that, for the good of the industry, I am throwing open the facilities of Dry-Zero laboratory to all manufacturers of electric refrigerators genuinely interested in basic improvement, so they may benefit by knowledge gleaned from the synchronized tests. This should result in fewer models being tried out on the public and should tremendously reduce the troubles of customer dissatisfaction. There is no excuse for unintentionally inferior jobs being marketed with such tests available."

Worked Out by Goodheart

Credit for working out the synchronizing formula, according to Mr. Lindsay, goes to Marshall F. Goodheart, chief of the Dry-Zero laboratory.

The formula is based on the fact that moisture is the prime enemy of refrigerator cabinet durability and permanent efficiency, according to Mr. Goodheart. Moisture, he says, is responsible for the breakdown of most insulating materials by destroying their efficiency and producing conditions that result in molding, disintegration and general deterioration.

"Therefore," he declares, "to synchronize the effects of actual kitchen use with laboratory tests, which accelerate only by inevitable natural means the entry of moisture into a cabinet's walls, all that is needed is a method

of accurately comparing laboratory and kitchen moisture conditions.

"This is exactly what the synchronizing formula does. It shows, for example, that conditions in Galveston causing moisture to enter a refrigerator's walls are slightly more than one-quarter as severe as conditions in the laboratory test room. Therefore, a year's use in Galveston can be duplicated in the laboratory in about one-quarter of a year—93 days, to be exact.

Fortunately, almost the whole responsibility for the entry of moisture rests on one factor. This is the vapor pressure outside the cabinet. The United States Weather Bureau keeps a daily record of these pressures in all parts of the country. Therefore, we have a complete record for every locality of moisture entry conditions to be compared with those in the laboratory.

Out-of-Door Conditions

"Unfortunately, these vapor pressure tables, like other weather bureau statistics, are for out-of-door conditions which are usually less severe, so far as moisture is concerned, than are conditions in the average kitchen, due to moisture from cooking. This is particularly true in winter. Because sufficient data on these conditions have not been collected, we have used the weather bureau's outdoor vapor pressure data, making our calculations ultra-conservative."

"Why vapor pressure is responsible for moisture accumulating in a cabinet's walls is, perhaps, not sufficiently recognized," says Mr. Goodheart. "To understand what takes place, one must know that water vapor is a gas, just as are oxygen, hydrogen, and nitrogen. As a gas, water vapor has properties not possessed by water."

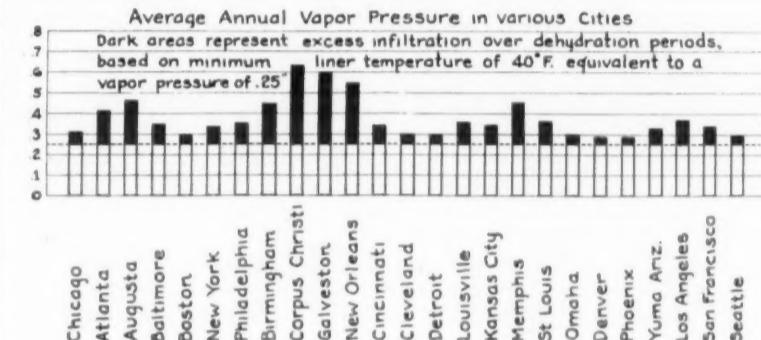
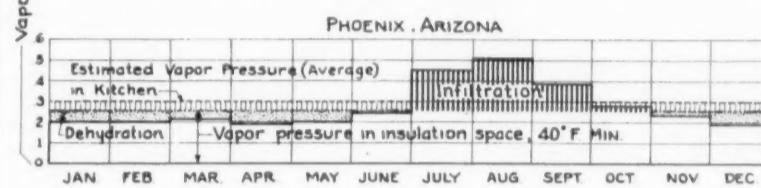
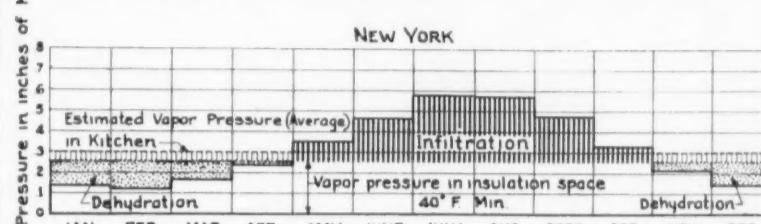
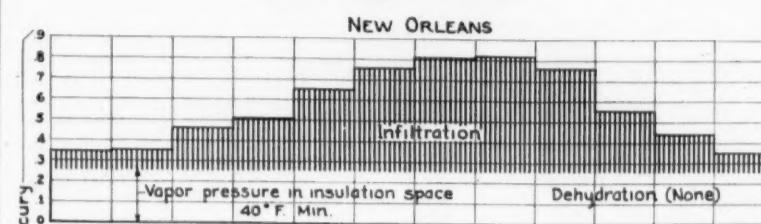
"Where water has surface tension that prevents finely divided penetration, water vapor as a gas travels freely about and passes readily through invisible pores and leakage channels that liquid water cannot penetrate. There is no complete commercial seal against its penetration into refrigerator walls," he says.

Penetration of Insulation

Engineers have recognized for some time that water vapor thus is able to penetrate and wreak havoc with most refrigerator insulation. Not long ago it was generally believed that this vapor penetration was due to osmosis (the interdispersion of gases or liquids through a barrier) and "breathing" (expansion and contraction of the air in a refrigerator's walls due to changing temperatures).

However, numerous tests during the past few years indicate these are minor causes, often entirely negligible," Mr. Goodheart states. "The same tests have shown that the dominating force actively driving water vapor through the moisture seals is vapor pressure. Higher vapor pressure on the outside causes vapor to be driven

How Vapor Pressure Acts on Refrigerators



These charts illustrate how vapor pressure forces moisture into the walls of a refrigerator cabinet. When outside vapor pressures are greater, entry of moisture occurs. Based on United States Weather Bureau figures, the three upper charts show monthly vapor pressures in various cities, and how these pressures compare with opposing vapor pressures inside the refrigerator walls. The charts also show the higher vapor pressures believed to exist in kitchens, due to cooking, that eliminate the dehydration that might occur were the refrigerator in the open air. Accurate figures on kitchen moisture conditions, however, are not yet available.

into the areas of lower vapor pressure inside the refrigerator's walls.

"On the other hand, if and when the vapor pressure inside the wall is higher than in the room, then vapor tends to be driven in the other direction and there is drying and dehydration. Water vapor flows from high pressure to low pressure areas just as air flows into a vacuum. This action is independent of air infiltration."

Pressure Comparison

"How the pressures inside and outside a refrigerator wall compare in several localities (with and without addition for kitchen conditions in winter averaging not less than 35 per cent relative humidity) is shown on the adjoining charts. The excess of outside pressure over inside pressure is the comparative gauge of the amount of water vapor that will enter a particular cabinet during a year."

"The vapor pressure inside the walls of a refrigerator is usually lower than the vapor pressure outside because of the low temperature of the inner liner. The cold liner condenses the excess vapor, liberating heat that is absorbed by the refrigerating unit. This is a continuous process, the excess vapor being condensed after entry, thus preventing the pressure inside the wall from increasing."

Rapid Process

"This is a rapid process if the moisture seal is poor or there are large spaces inside the walls to serve as condensation chambers. Hydroscopic insulating materials also contribute to a speedy influx of water vapor by absorbing the moisture as it enters, thus keeping down the vapor pressure within the wall by acting as a sort of suction pump until such time as the material is saturated. This process becomes slow or even negligible if the insulation is non-hydroscopic and absorbs little moisture."

"The damage that results once the water vapor has entered the walls of an average refrigerator and been condensed into water is well known," he points out.

"Speeded-up" laboratory tests accelerate the influx of water vapor by increasing vapor pressures in the test room. This is done by maintaining under absolute control a high temperature with a high percentage of relative humidity.

"Therefore, a comparison between the vapor pressure in any locality and that in the laboratory test room provides a ratio between the severity of laboratory conditions and those encountered in actual use."

"In making these comparisons, we

between the two sets of conditions as expressed in the following formula:

$$\frac{\text{Test Room}}{\text{Field Conditions}} = \frac{\sqrt{(e_1 - e_2) d_1}}{\sqrt{(e_1 - e_2) d_2}}$$

"This formula is not as formidable as it looks. It merely states that the moisture driving force in the test room is affected by the difference in vapor pressure outside and inside the cabinet walls and also the density of the vapor. The lower portion of the formula simply means that we sum up and apply the same rules to the vapor pressures and densities for each day of a complete year in any particular section of the country."

"From this ratio we find how many days in the laboratory test room, for example, at a temperature of 100°F, and 93 per cent relative humidity, equal a year in any part of the United States. A number of such comparisons have been worked out."

Days	Equal
In Test Room	One Year In
93	Galveston
19	St. Louis
11	New York
5	Yuma, Ariz.

"We must emphasize again, however, the fact that weather bureau outdoor vapor pressure figures were used in calculating this table and that to synchronize perfectly with actual kitchen conditions it would be necessary to lengthen the test room period to compensate for higher indoor vapor pressure resulting from cooking and other air moistening agencies. This, however, is necessary only for cold areas where outdoor vapor pressures in winter drop well below the estimated kitchen minimum."

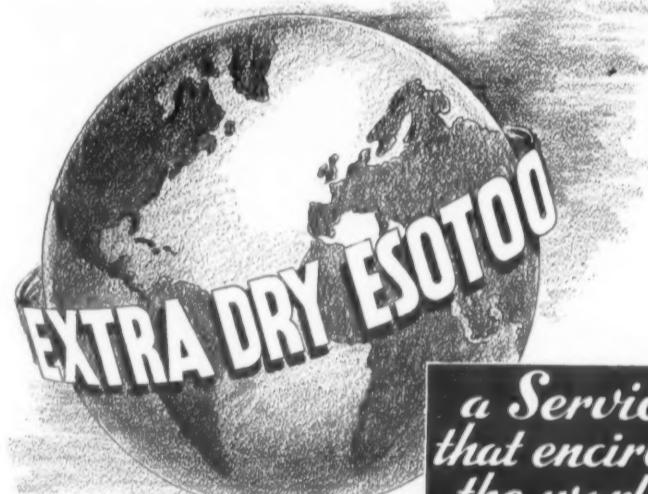
AMERICAN BLOWER PLANS SALES OF DECALORATOR

(Concluded from Page 1, Column 4) and Country club. A night session, presided over by Mr. Barth and featuring the president's talk, was held in the clubhouse.

Other addresses on the night program included those of E. L. Hogan, head of the corporation's air-conditioning department; L. I. Simmons, company engineer and E. L. Anderson, head of the experimental department.

Friday's speakers included N. L. Allison and M. S. Kice, who discussed the hydraulic coupling, and G. C. Polk, whose subject was dust collectors. The sales engineers lunched with delegates to the American Society of Heating and Ventilating Engineers, also in convention in Detroit at the time.

Saturday was devoted to a study of home air-conditioning problems, merchandising, sales promotion, and credit. Speakers were F. H. Wagner, E. W. Petersen, R. Valle, Benjamin Adams, and Sales Manager Barth. Saturday afternoon the corporation and its representatives were hosts to members of the heating and ventilating society at an air-conditioning exhibit at the American Blower factory.



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El Paso, Tex.—Denver Fire Clay Co.
Honolulu, Hawaii—Weldelite Supply Co.
Houston, Tex.—Universal Term. & Warehouse Co.
Kansas City, Mo.—G. S. Robins & Co.
Jacksonville, Fla.—Mead Warehouse & Dist. Co.
London, Eng.—Honeywell & Stein, Ltd.
Los Angeles, Cal.—The Braun Corp.
Miami, Fla.—Rickett Warehouse & Storage Co.
Montreal, Que.—Bruce, Ross, Ltd.

New Orleans, La.—Bartlett Chemicals, Inc.
New York City—Virginia Smelting Co.
Philadelphia, Pa.—Merchants Warehouse Co.
Pittsburgh, Pa.—Kirby Transfer & Storage Co.
Portland, Ore.—Carl F. Miller Co.
Rochester, N. Y.—Hollis Chemical Co.
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St. Paul, Minn.—Midwest Chemical Co.
San Francisco, Cal.—Braun, Knecht-Haumann Co.
Salt Lake City, Utah—Denver Fire Clay Co.
Seattle, Wash.—Carl F. Miller Co.
Sydney, Australia—Dangar, Gedye & Co., Ltd.
Syracuse, N. Y.—Great Northern Warehouse Co.
Tampa, Fla.—Lee Terminal & Warehouse Corp.
Toronto, Can.—Bruce, Ross, Ltd.
Vancouver, B. C.—Shanahan Chemicals, Ltd.
Winnipeg, Manitoba—Beaver Soap & Chemicals, Ltd.

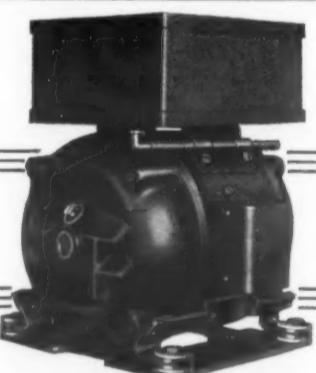
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Century
MOTORS

PATENTS

ISSUED JUNE 6, 1933

(Continued from Last Issue)

1,913,080. RELEASING TRAY FOR ICE CUBES. Henry Albert Hertner, Amarillo, Tex. Filed Nov. 22, 1932. Serial No. 643,905. 1 Claim. (Cl. 62—108.5.)

A device of the class described comprising a tray having a flat perforated bottom for receiving the tray of a refrigerator in inverted position thereon whereby by pouring water over the refrigerator tray the cubes of ice will be released and dropped into the first-mentioned tray and the water will drain through the perforations in the flat bottom, said first mentioned tray having upstanding side and end walls vertically arranged, an outwardly extending horizontally arranged flange connected to the upper edges of said walls, a handle forming extension formed on the central portion of that part of the flange connected with one of the end walls, said extension being of elongated form and having its outer portions curving downwardly and semi-spherical feet forming members having their flat faces connected to the corner portions of the lower face of the flat bottom, said tray including its bottom, walls, flange and handle extension being formed of a single piece of material with the walls imperforate.

1,913,116. VALVE. Raymond C. Haimbaugh, Chicago, Ill., assignor, by mesne assignments, to Grigsby-Grunow Co., a

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LIST PRICES.**

THE BUSH MFG. CO., HARTFORD, CONN.

Corporation of Illinois. Filed Jan. 26, 1931. Serial No. 511,321. 4 Claims. (Cl. 137—152.)

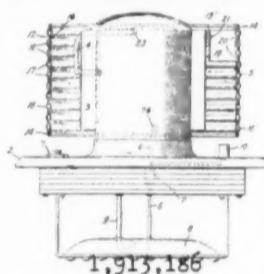
1. A valve comprising a casing having an inlet opening provided with a seat and an outlet opening, a channel within said casing and between said openings, said channel comprising a cylindrical portion adjacent said inlet opening and an outwardly tapering portion adjacent said outlet, and a valve member adapted to operate in said channel, said valve member comprising an elongated body, a seating portion at one end of said body adapted to cooperate with the seat on said inlet portion, a substantial portion of said body portion being adapted to fit snugly within the cylindrical channel and so shaped as to provide a gas passage along a part of said body portion only of said valve member.

1,913,175. METHOD OF MAKING REFRIGERATING APPARATUS. Otto M. Summers, Dayton, Ohio, assignor to Frigidaire Corp., Dayton, Ohio, a Corporation of Delaware. Original No. 1,798,946, dated March 31, 1931, Serial No. 496,895, filed Nov. 20, 1930, and in Great Britain April 25, 1933. Application for reissue filed Jan. 25, 1933. Serial No. 663,488. 10 Claims. (Cl. 62—119.5.)

1. The method of manufacturing a heat exchange element which comprises forming a tube into a serpentine coil having a plurality of straight portions, slitting a plurality of metal strip fins at a plurality of spaced points corresponding to the straight portions of the tube, supporting said fins against lateral displacement and forcing the straight lateral displacement and forcing the straight portions of the tube laterally into the slots so formed and soldering the strip fin to the straight portions of the tube.

1,913,186. CONDENSER FOR REFRIGERATING MACHINES. Russell W. Ayres, Schenectady, N. Y., assignor to General Electric Co., a Corporation of New York. Filed March 1, 1932. Serial No. 596,062. 2 Claims. (Cl. 257—36.)

1. An air-cooled condenser for refrigerating machines including a body having contacting metallic sheets joined together



1,913,186

at the ends thereof to form an annulus, one of said sheets having a continuous zig-zag groove cooperating with the other of said sheets to form a passageway extending from one side of said joint about said body and between said sheets to the other side of said joint.

1,913,297. REFRIGERATING APPARATUS. Archie Hugh Strong, Norristown, Pa., assignor to Master Domestic Refrigerating Co., Inc., Conshohocken, Pa., a Corporation of New York. Filed Oct. 7, 1930. Serial No. 486,879. 4 Claims. (Cl. 236—92.)

1. In a single valve structure adapted to automatically shut at a predetermined temperature, and automatically open at a predetermined pressure; the combination with a casing having two bellows chambers, a coaxial relation at respectively opposite ends thereof; a partition between said bellows chambers; a valve seat in said partition; a fluid inlet in said partition upon one side of said seat; a fluid outlet upon the other side of said seat; said inlet and outlet being continually respectively in communication with said bellows chambers; of a reciprocatory valve adapted to close upon the inlet side of said seat and having a screw threaded stem extending thru said seat; a nut sleeve upon said stem; a bellows head having a recess in which said nut extends; a pivot connecting said bellows head with said nut in said recess; a bellows connecting said head with a tubular closure for one end of said valve casing; a screw plug in said closure; a spring in said bellows between said head and said screw plug, adapted to stress and extend said bellows to open said valve; and screw means extending thru said plug and axially adjustable to vary the effective stress of said spring upon said bellows head and thereby vary the pressure at which said valve may be opened and shut; a bellows head in the other of said chambers adapted to contact with and shift said valve to close it; a bellows connecting that head with a closure for the adjacent end

of said casing; a conduit extending from the latter bellows and closure and terminating in a bulb; and a thermostatic fluid in said bulb, conduit, and bellows connected therewith; whereby the latter bellows is expanded to close said valve at a predetermined temperature of said thermostatic fluid to which said bulb is subjected.

1,913,345. APPARATUS FOR COOLING BEVERAGES. Lawrence C. Smith, Buffalo, N. Y. Filed March 29, 1932. Serial No. 601,749. 4 Claims. (Cl. 62—141.)

1. A beverage cooler comprising a cabinet, an expansion coil in said cabinet, said expansion coil including sections of refrigerant pipe lying in common vertical planes, metallic plates embracing the said sections, said sections being regularly spaced to provide deep bottle receiving compartments, and a bulk liquid pipe formed with convolutions interposed with certain of the refrigerant pipe sections, said liquid pipe convolutions also being embraced by said metallic plates.

REISSUE

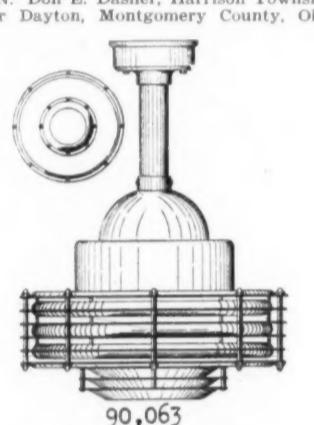
1,859. ABSORPTION REFRIGERATING SYSTEM. Guido Maluri and Raoul Felice Bossini, London, England, assignors, by mesne assignments, to Electrolux Service Corp., New York, N. Y., a Corporation of Delaware. Original No. 1,798,946, dated March 31, 1931, Serial No. 496,895, filed Nov. 20, 1930, and in Great Britain April 25, 1933. Serial No. 663,488. 10 Claims. (Cl. 62—119.5.)

5. In absorption type refrigerating apparatus having a generator and absorber interconnected for the circulation of absorption liquid therebetween, a thermosiphon element in the path of circulation from the generator to the absorber, separately controlled individual heating means for the generator and said element, and means to conduct vapor produced in said element into the presence of vapor from the generator.

DESIGNS

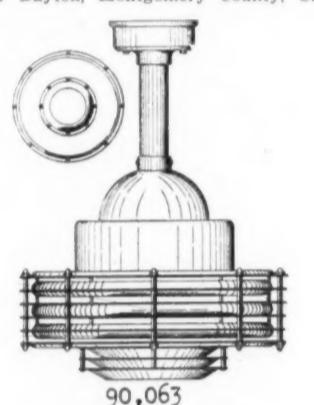
90,062. AIR CONDITIONING PEDESTAL FAN. Don E. Dasher, Harrison Township, near Dayton, Montgomery County, Ohio, assignor to Trupar Mfg. Co., Dayton, Ohio, a Corporation of Ohio. Filed March 17, 1933. Serial No. 47,495. Term of patent 14 years.

The ornamental design for an air conditioning pedestal fan, as shown and described.



90,062

90,063. AIR CONDITIONING CEILING FAN. Don E. Dasher, Harrison Township, near Dayton, Montgomery County, Ohio.



hagen near Berlin, Germany, assignor, by mesne assignments, to The Hoover Co., North Canton, Ohio, a Corporation of Ohio. Filed Dec. 11, 1930, Serial No. 501,519, and in Germany Dec. 7, 1929. 3 Claims. (Cl. 62—119.5.)

1. In a continuous absorption refrigerating machine comprising a generator, a condenser or liquefier, a common evaporation and absorption chamber, said chamber containing a neutral gas through which the working medium vapor passes over to the absorption liquor substantially only through diffusion, said gas being admixed to the working medium vapor only in such a small quantity that the total pressure of the mixture of neutral gas and working medium vapor remains low compared to the vapor pressure of the working medium alone measured at the normal temperature of evaporation, and liquid columns for maintaining the difference of pressure existing between the diffusion chamber on the one hand and the generator and liquefier on the other hand, said working medium having a vapor pressure of less 20 cm. water head at the normal temperature of evaporation (0 to -10° C.).

1,913,536. ICE TRAY. March Culmore, Houston, Tex. Filed Jan. 12, 1932. Serial No. 586,094. 1 Claim. (Cl. 62—108.5.)

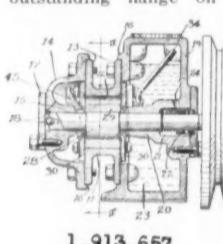
An ice tray comprising a container, a removable partition assembly therein formed of lengthwise and transverse partitions composed of single ply flexible strips of metal anchored together and forming outer and intermediate series of ice compartments, one of said transverse partitions being continuous and other of said transverse partitions being divided between said lengthwise partitions, forming sections, said sections being flexibly anchored to their corresponding lengthwise partitions.

1,913,624. MEANS FOR COOLING PERISHABLE FOOD PRODUCTS. Sigvard Johan Bennetter, Oslo, Norway. Filed May 4, 1928. Serial No. 275,201. 10 Claims. (Cl. 62—24.)

1. Apparatus for cooling perishable goods such as meat, fish, fruit and ale during transport in railway cars, comprising a compartment arranged longitudinally in the car and adapted to receive the goods, a container for cooling medium disposed longitudinally in the top part of the car compartment and presenting cooling surfaces forming the exterior container walls, outlets disposed in said walls, means for sucking air from the interior of the compartment and forcing it through the cooling medium within the container, and out through said outlets and means for directing such air past said cooling surfaces and in the form of a descending central stream of cold air substantially over the whole length of the compartment.

1,913,657. ROTARY COMPRESSOR. John C. Buchanan and Earl F. Hubacker, Detroit, Mich., assignors to Norge Corp., Detroit, Mich., a Corporation of Michigan. Filed March 17, 1930. Serial No. 436,282. 2 Claims. (Cl. 230—149.)

1. A rotary pump comprising an open-ended cylinder having a concentric annular outstanding flange on each end



1,913,657

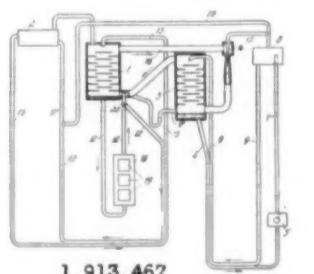
thereof providing for air cooling of the cylinder, longitudinally extending end closure housings for said cylinder secured concentrically on said flanges, shaft bearings in said housings, a shaft journaled in said bearings carrying an eccentric housed within said cylinder, a rotor on said eccentric in pumping relation to said cylinder, end sealing members in said housings secured stationary to said flanges and in sealing contact with the ends of said rotor, one of said closure housings providing a reservoir for lubricant to normally extend above the working level of said rotor, and being provided with a discharge outlet for the working fluid, and conduit means for leading the discharge of working fluid and lubricant from said cylinder through an end seal in said last-named housing.

1,913,659. AIR CONDITIONING. Thomas Chester, Pittsburgh, Pa. Filed Feb. 21, 1931. Serial No. 517,475. 2 Claims. (Cl. 237—9.)

1. In a ventilating system, an enclosure having an air supply connection, a second, adjacent enclosure having a conditioned air outlet, means providing air flow from said first chamber into said second chamber, partition means in the second chamber, providing a conduit leading from said outlet with a plenum chamber adjacent the conduit, air conditioning means within said conduit, heating means at the delivery end of said conduit, said partition having a controlled bypass opening providing communication from said plenum chamber to said conduit, between said air conditioning means and said heating means.

1,913,467. ABSORPTION REFRIGERATING MACHINE. Edmund Altenkirch, Neuenhagen near Berlin, Germany, assignor, by mesne assignments, to The Hoover Co., North Canton, Ohio, a Corporation of Ohio. Filed March 18, 1929, Serial No. 347,984, and in Germany March 28, 1928. Renewed Dec. 9, 1932. 7 Claims. (Cl. 62—119.5.)

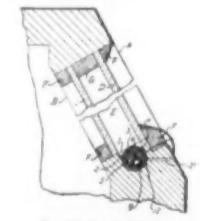
1. In an absorption refrigerating machine in combination, an evaporator, an absorber, a generator, and a reabsorber.



1,913,467

1,913,703. MEANS FOR PREVENTING SWEATING OF GLASS OF REFRIGERATING CASES. Alexander L. Duval d'Adrian, Alton, Ill., assignor to Hussmann-Ligonier Co., St. Louis, Mo., a Corporation of Delaware. Filed May 21, 1932. Serial No. 612,673. 5 Claims. (Cl. 183—4.)

1. In combination with a refrigerating case having a transparent wall portion provided by spaced sections of glass, a



1,913,703

container disposed at the space between said sections of glass, a body of moisture-

absorbent material in said container, and heating means for applying heat to said moisture-absorbent material so as to evaporate the moisture absorbed by said moisture-absorbent material, said container being arranged so as to discharge vapor resulting from the evaporation of moisture from said absorbent material outside of the space between said spaced sections of glass.

1,913,844. REFRIGERATING APPARATUS. Alex A. McCormack, Dayton, Ohio, assignor to Frigidaire Corp., Dayton, Ohio, a Corporation of Delaware. Filed Jan. 31, 1931. Serial No. 512,639. 5 Claims. (Cl. 230—207.)

3. A compressor for refrigerating apparatus comprising in combination a casing, means separating said casing into a plural-

1,913,844

ity of chambers on the high pressure side of said compressor, one of said chambers providing a reservoir for lubricant, said means providing a compression space communicating with a second chamber, a disk-shaped member forming the top wall of said compression space, compressing means in said compression space actuated by said disk-shaped member, means for conveying lubricant from said reservoir to said latter chamber for sealing the joint between said disk-shaped member and said means providing a compression space during the operation of said compressing means, and means for returning the lubricant to said reservoir during periods of idleness of said compressing means.

1,913,857. REFRIGERATION PLANT. Paul A. Scherer, Medford, Ore., and Grahame B. Ridley, San Francisco, Calif., assignors to Southern Oregon Sales, Inc., Medford, Ore., a Corporation of Oregon. Filed Oct. 6, 1930. Serial No. 486,618. 5 Claims. (Cl. 62—102.)

1. In a refrigeration plant, a storage compartment having a foraminous floor, an air duct formed below said floor through which air from the compartment can be removed, a corridor formed adjacent one end of the compartment and having access to the compartment for transfer of products, and means utilizing said corridor as an air duct for introducing cool air into the compartment.

1,913,866. WATER COOLER. Richard C. Wolfe, Los Angeles, Calif., assignor to California Consolidated Water Co., Los Angeles, Calif., a Corporation of Delaware. Filed July 22, 1931. Serial No. 552,313. 10 Claims. (Cl. 62—91.)

1. A water cooler comprising a reservoir of water-tight material, a casing of water-absorbent material surrounding said reservoir and in contact therewith, and a second, separate reservoir positioned below said first reservoir, and detached therefrom, whereby it may be removed for cleaning or filling independently of said first reservoir, said casing of water-absorbent material extending into said second reservoir.

1,913,869. REFRIGERATING APPARATUS. Francis Russell Bichowsky, Wash.

(Continued on Page 20, Column 1)

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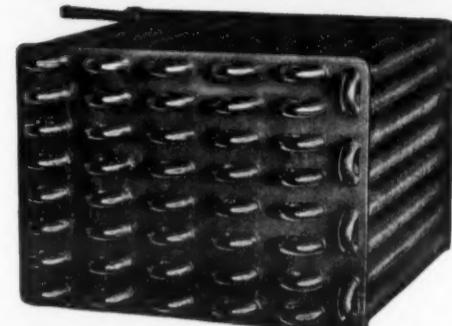
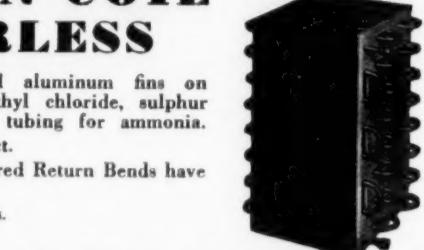
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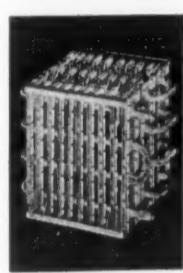
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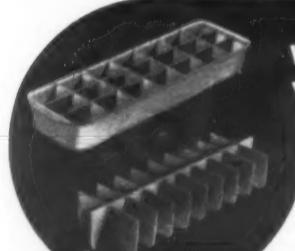
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Statistics

No. 1258 (Dealer, Rhode Island)—"Please inform us where we can purchase a custard machine?"
Answer—Kohr Custard Machine Co., York, Pa.; Metal Door & Trim Co., McCord, Ind.; and York Ice Machinery Corp., York, Pa.

Ice Cube Tongs

No. 1259 (Manufacturer's representative, Australia)—"We noticed in your issue of April 19 a new Util-Tong made by Henry Paulson & Co. What is their address?"

Answer—37 South Wabash Ave., Chicago, Ill.

Ice Cube Grids

No. 1260 (Service company, Kansas)—"Can you give me any information as to where I can purchase, or have made, grids that will fit in a 5-gal. ice cream can for freezing ice cubes?"

Answer—Chicago Refrigeration Service Co., 360 East Grand Ave., Chicago, Ill., and Iceless Refrigeration Accessories Co., 2401 Chestnut St., Philadelphia, Pa.

Kelvinator Shipments

No. 1261—"A Kelvinator dealer asked me to write to you asking for the number of Kelvinators shipped in May."

Answer—Kelvinator Corp. shipped 43,357 refrigeration units during May.

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No. 1262 (Refrigerating engineer, Michigan)—"Kindly give us the manufacturers of small 3-lb. and 10-lb. service drums for methyl chloride?"

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Ice Cream Freezers

No. 1263 (Life insurance agent, Kentucky)—"Can you furnish me with the latest invention for freezing ice cream?"

Answer—Manufacturers of electric ice cream freezers to fit into the cooling unit of electric refrigerators are Alaska Freezer Co., East Winchendon, Mass., and S. M. Howes Co., Charles-town Postal Station, Boston, Mass.

Colonial Refrigerator

No. 1264 (Dealer, New York)—"We would like to know the name of the company that manufactures the Colonial refrigerator."

Service Parts for Rice Units

No. 1265 (Dealer, New York)—"We would like to know if you could give the name of the company that sells Rice compressors and parts for re-

frigerators."

Answer—Gibson Electric Refrigerator Corp., Greenville, Mich., and Perfection Stove Co., 7609 Platt Ave., Cleveland, Ohio.

Air-Conditioning Specifications

No. 1269 (Manufacturer, Kentucky)

—Have you published a summary of the specifications and characteristics of air conditioners similar to the summary of beer coolers in the May 1 REFRIGERATED FOOD NEWS?"

Answer—This information will be published in the July 12 issue of ELECTRIC REFRIGERATION NEWS.

Gilmer Refrigerator Belts

No. 1270 (Distributor, Iowa)—"Will you advise us from whom we can secure Gilmer refrigerator belts?"

Answer—L. H. Gilmer Co., Keystone & Cottmar Sts., Philadelphia, Pa.

Kerosene Refrigerators

No. 1271 (Dealer, West Virginia)—"I am interested in getting in touch with some company that manufactures a refrigerator using kerosene."

Answer—Gibson Electric Refrigerator Corp., Greenville, Mich., and Perfection Stove Co., 7609 Platt Ave., Cleveland, Ohio.

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Exports of Refrigerators

April, 1933, Shipments Reported by the Bureau of Foreign and Domestic Commerce, Washington, D. C.

	Electric Household Refrigerators Number	Electric Commercial Refrigerators Up to 1 Ton Number	Parts for Electric Refrigerators Value
Austria	203	\$ 16,796	118 \$ 11,983
Belgium			293
Czechoslovakia	1	38	1,842
Denmark	4	282	989
Finland	825	47,962	329
France	21	1,388	44,285
Germany	10	692	6,717
Irish Free State	3	324	110
Italy	124	9,999	2,648
Malta, Gozo, and Cyprus	2	178	6,528
Netherlands	118	7,837	1,327
Norway	81	6,154	527
Portugal	10	675	527
Rumania	1	272	527
Spain	105	7,040	4,359
Sweden	96	5,443	5,709
Switzerland	271	15,155	13,565
United Kingdom	665	29,465	13,248
Yugoslavia	2	180	10
Canada	164	13,279	13,068
Guatemala			158
Honduras			59
Nicaragua			3
Panama	41	5,323	4,376
Salvador	28	1,522	116
Mexico	86	7,994	3,173
Bermudas	10	904	42
Barbados	3	337	10